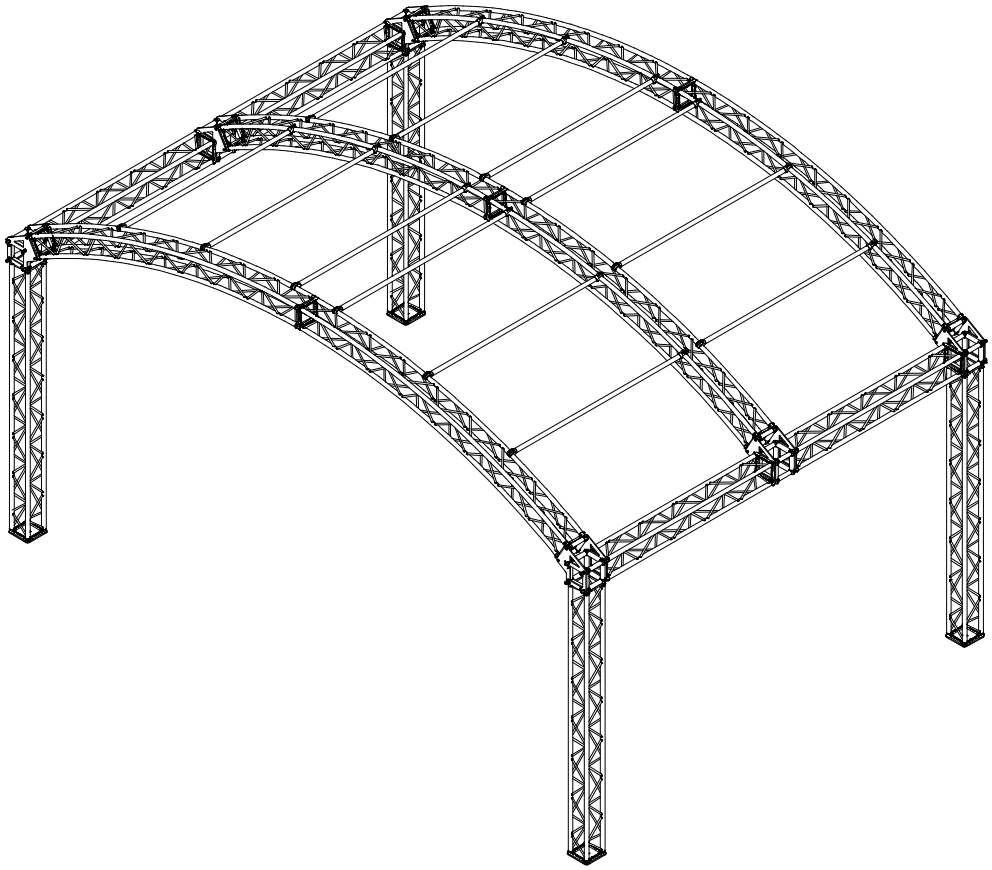
ARC ROOF
RSA0604ST – RSA0806ST
USER MANUAL



INSTALLATION, USE AND MAINTENANCE MANUAL

Thank you for choosing Litec products.
Each of our products is the result of careful design and in-depth technical analysis.
We always commit ourselves to guarantee the best quality and highest safety. If you follow the instructions contained in this manual carefully, you will use our products in the correct way obtaining their maximum performances and preventing them becoming damaged.

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1. GENERAL DATA OF THE MANUFACTURER

1.1 MANUFACTURER DATA

The product that you have chosen has been designed and carried out by:
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E-mail: info@litectruss.com

1.2 CONTENT OF THE MANUAL

This manual gives all information regarding the usage and the maintenance of the products called "Arc Roof RSA0604ST and RSA0806ST".
The manual refers to the intended use of the machine, to technical features and to the installation, use and maintenance instructions.
Burning behaviour certificate and canopy declaration of conformity

1.3 ADDRESSEES OF THE MANUAL

This publication refers to:
- Factory manager, if he is present.
- Persons in charge of the safety and of the design of the temporary event.
- The personnel in charge of the installation, use and dismantling of the machine.
- The personnel interested in the usage of the machine.
- The personnel in charge of the maintenance.

The manual must be kept by a person who is responsible for it, in a suited place for its preservation and its consultation.
In case of loss or deterioration, the substitutive documentation must be requested to the manufacturer.

1.4 REVISIONS OF THE MANUAL

The manual refers to the conformity of the product when it is issued in the market. The manual is an integral part of the product and it can not be considered inadequate just because it has been updated subsequently according to new experiences. Possible changes, corrections of the structure sold afterwards, do not oblige the manufacturer to bring changes to the equipment supplied earlier and not even to consider the structure and its manual as inadequate and lacking.
If the manufacturer should bring possible additions to the manual and consider right to send them to the users, they should keep the additions with the manual itself because the additions should become an integral part of it.

Note: The manufacturer has the material and intellectual property of this publication and he forbids the divulgation and the duplication, even a partial one, without his previous written permission.

1.5 TABLE OF REVISIONS

The following table resumes the revisions of the manual:

RELEASE	*ANNOTATIONS*	*DATE*

2. WARRANTY AND RESPONSIBILITY

2.1 WARRANTY AND RESPONSABILITY OF THE MANUFACTURER

With reference to what is reported in this instruction manual, Staging Systems Europe S.p.A. declines any responsibility in case of:

- Use of the product in disagree with the national laws about security and industrial injury.
- Wrong predisposition of the working place and of the structures where the product operates.
- Unauthorized changes in the machine.
- Use of the machine by unauthorized technical personnel.

In order to take advantage of the warranty given by the manufacturer, the user must observe strictly the prescriptions written in this manual, above all:

- He should always work following the functional limits of the product.
- He should always make a periodic maintenance.
- He should always use the original spare parts suggested by the manufacturer.

WARNING. It is forbidden to use the product in disagreement on the instructions given by the manufacturer. The instructions written in this manual do not substitute but complete the duties regarding the national laws about security and industrial injury.

2.2 REFERENCE STANDARDS

The design and the production of the "Arc Roof RSA0604ST and RSA0806ST" has been realized according to the following standards:

Applicable standards:

- EN 1999-1–1:EUROCODE 9
- DIN EN 13814
- DIN EN 1991-2-4: EUROCODE 1
- DIN 4112

3. PRESCRIPTION FOR THE SAFETY

3.1 INFORMATION AND GENERAL BEHAVIOUR ABOUT THE SAFETY

The assembling and disassembling operations of the product must be performed by fully trained, competent and suitably experienced people and organization.
The personnel involved in the "Arc Roof RSA0604ST and RSA0806ST" use must be supplied with the necessary equipments.

In particular, the following PPE must be provided during the assembling and disassembling procedures of the "Arc Roof RSA0604ST and RSA0806ST":

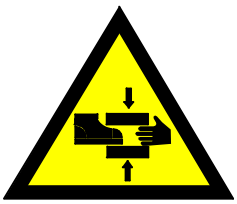
- Safety shoes.
- Protective gloves.
- Head protection (helmet)

3.2 SPECIFIC INFORMATION ABOUT THE SAFETY

During the assembling, use and dismantling operations of the product, the working area should be delimited previously in order to prevent unauthorized personnel from entering.

3.3 SAFETY SIGNS

The product is supplied with the following safety signs:

	Obligation of consulting the user manual		**Assembling and dismantling operations must be performed only by fully trained, competent and suitable experienced people and organizations**	
	Obligation of using protective helmet			No handling of the pulley
	Obligation of using protective gloves			No lifting people
	Obligation of using protective shoes			Warning suspended loads
	Obligation of grounding			Danger of cutting hands and feet for planes or mechanical devices in movement

4. PRESENTATION OF THE PRODUCT

4.1 GENERAL DESCRIPTION OF THE PRODUCT

This report concerns a stage roof structure for Staging Systems Europe. The roofings will be assembled in the sizes of 6x4 m and 8x6 m.
The total height of the structure is 5,0 m.
The stages roof are considered to be a temporary structure that can be dismantled and not as a permanent building.
The whole structural-framework consisting of aluminum trusses is made by the company Staging Systems Europe.

4.2 GENERAL DATA

Size of the roof

The roof will be assembled in the sizes of 6x4 m and 8x6 m. The total height of the stage is 5,0 m. The stages roof are considered to be a temporary structures that can be dismantled and not as a permanent building.
The whole structural-framework consisting of aluminium trusses is made by the company Staging Systems Europe. Geometry and allowable loads are shown at the end of the paragraph.
The roof area is enclosed with canopy, rear wall and sides can be closed with canopy.

Canopy

The canopy is calculated to be 100% closed.
The wall canopy is fixed at the horizontal roof trusses as well as to the columns.
The structure is stiffened by means of guy wires in rear- and sidewalls.
Guy wires need to be adequately tensioned before using.

Above wind force 8, the canopy of the rear wall and of sidewalls needs to be removed. As regards further information, please refer to the structural report nr 7234 of the Engineering office Krasenbrink+Bastians.

4.3 PURPOSE OF USAGE

The intended use of the product is destined for lifting and supporting the truss structures and the roofing systems typically used in the entertainment activities.

Entertainment activities are included but not limited to leisure, sports, arts, cultural performances, amusement or presentation of products.

Examples of entertainment activities are:

- Product presentations;
- Theatre shows, musicals, opera and ballet;
- Classical, pop and rock concerts;
- Festivals;
- Exhibitions and trade shows;
- Celebrations and parties;
- Fairgrounds;
- Conventions, demonstration meetings.

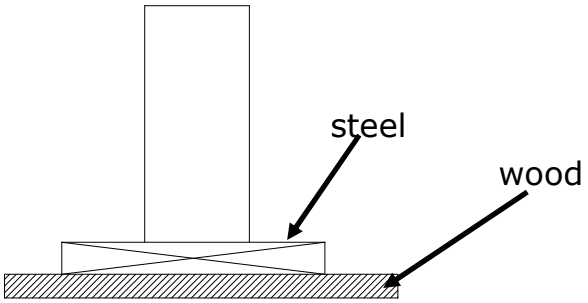
4.4 CONDITIONS AND LIMITS OF USE

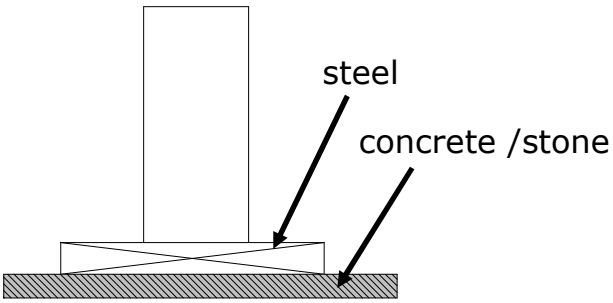
It is important to remember that the "Arc Roof RSA0604ST and RSA0806ST" is a machine constructed for lifting loads in the entertainment industry exclusively. It is forbidden using the product for lifting loads in industrial and production fields, not even as lifting device.

The following pages shows the allowable pay loads of the structure and the different possible configurations for equipments such as illumination (spots) and sounding displayed area. If the loading configurations differ from the following ones, please inform Staging Systems Europe office.

Loads up to 80 kg can be fastened at any position of the chord. Loads more than 80 kg must be positioned at the node or adequate proofs have to be carried out. Loads should be equally distributed over the trusses main chords of the trusses.
All given values are static loads. In case of affecting dynamic loads, they should be decreased with a factor of minimum 1,2.

Necessary ballast loading
Roof, rear wall and enclosed sides are fully closed with canvas wall.
Suspended loads on the roof and the load of the interlocking podium may be taken into account of the ballast loading calculation.





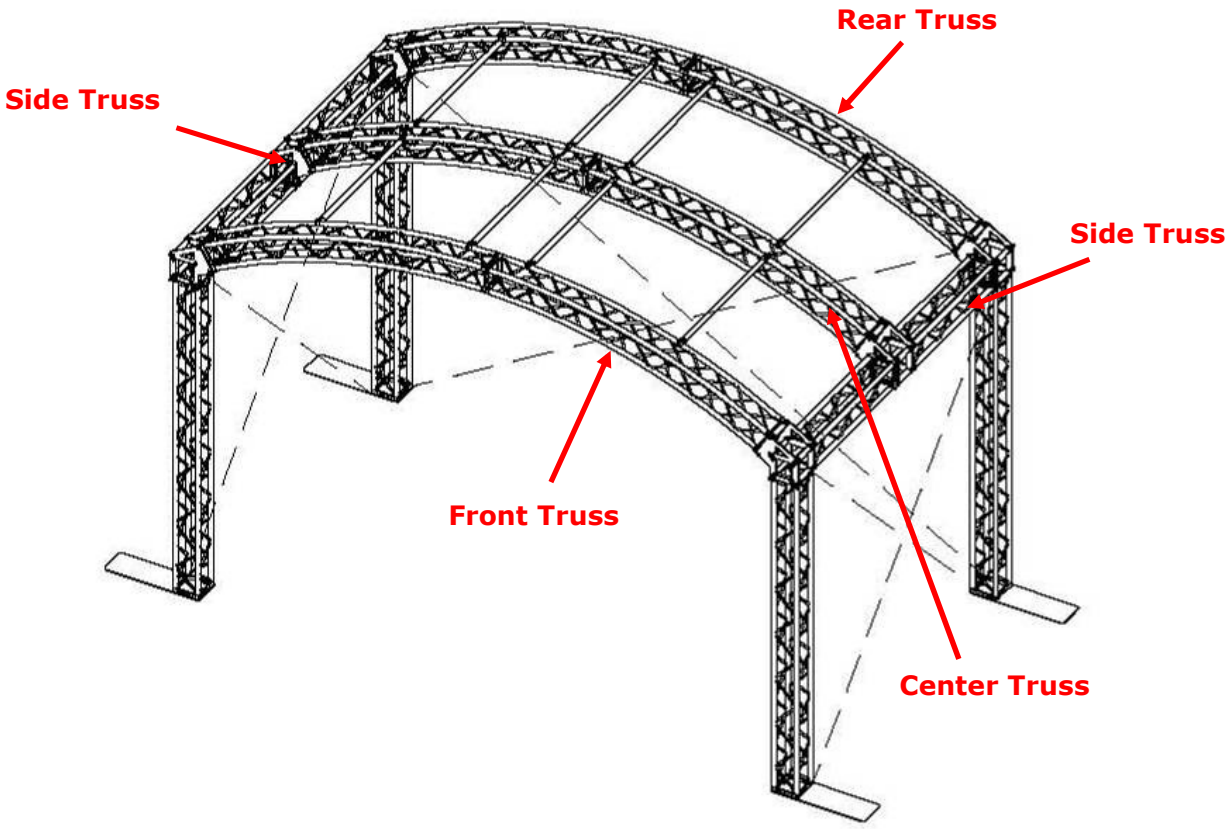
frictional coefficient μ
μ = 0,40 steel with wood; steel with stone or concrete.
μ = 0,60 bolted/put into steel with wood; bolted steel with stone or concrete.

It also important that the erection of the structure should be made only in appropriate weather conditions of wind force or snow weight.

Summarizing schemes and tables of the possible loading conditions of the structures are indicated as follows.

LEGENDA: P = concentrated load
q = distributed load

ARC ROOF (6x4)



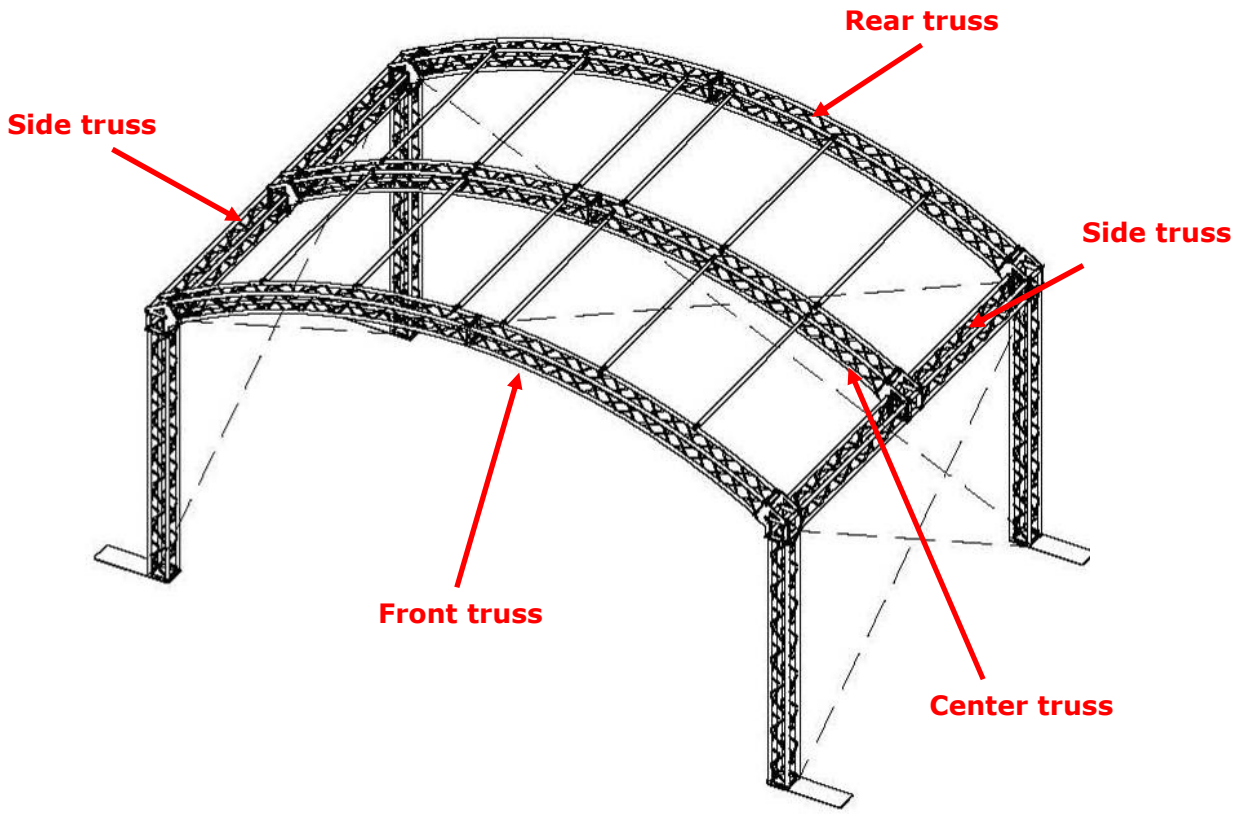
Legenda:

Stage 6x4 m	Front truss	Rear truss	Center truss	Side truss
Outdoor	110 kg/m	170 kg/m	90 kg/m	90 kg/m
Indoor	170 kg/m	170 kg/m	120 kg/m	120 kg/m

Attention: Per casi diversi da quello sopraindicato, riferirsi alla relazione di calcolo.

Please refer to the relevant calculation report in order to know the ballast needs. The roof structure MUST have ballast for outdoor applications.

ARC ROOF (8x6)



Legenda:

Stage 8x6 m	Front truss	Rear truss	Center truss	Side truss
Outdoor	70 kg/m	100 kg/m	30 kg/m	30 kg/m
Indoor	100 kg/m	100 kg/m	50 kg/m	50 kg/m

Attention: Per casi diversi da quello sopraindicato, riferirsi alla relazione di calcolo.

Please refer to the relevant calculation report in order to know the ballast needs. The roof structure MUST have ballast for outdoor applications.

4.5 LIST OF COMPONENTS

The "Arc roof RSA0604ST" and "Arc roof RSA0806ST" are given in a disassembled version. The components contained in the packaging are shown in the following picture:

LIST OF ARC RSA0604ST

Id.	Code	Part description	Quantity
1	LT QX30S350	ST 29 cm square L= 350cm reinforced truss	4
2	LT QX30S150	ST 29 cm square L= 250cm reinforced truss	4
3	LT QX30K8	6 way box corner	6
4	LT QXFC	Quick connection set for Q series	3
5	LT QXKFC	4 special steel half spigot with screw	4
6	LT FP30	Universal 29 cm truss floor plate	4
7	LT QX30SC-00019	ST 29 cm square – Circle 30° section ext. diam cm 1200	6
8	LT RAH157M3P	Brace w/clamps – 157,30 cm long	8
9	LT HIT001AR	Arc's inclination system	6
10	LT HRS20SET	Rubberband, 20 pcs set	5
11	LT HSA0604W	PVC white cover for 6x4 arc roof	1
12	LT TZ30K01	Assembly tool for half-spigot in 25&29 cm side truss	1
13	LT RGSW1300	10 mm steel wire – 1 ton – 3 meter long	4
14	LT RGSW1600	10 mm steel wire – 1 ton – 6 meter long	2
15	LT RGSS202	2 ton soft steel sling – 1 meter EWL	12
16	LT RGSH325CMK8	8 pcs set of CM shackle - 5/8" – 3,25 ton – screw pin type	3
17	LT RGBRT25002H	Pull lash strap – 2 ton – 2m w/swiwel hook	6
18	LT RGLCH085402	Load chain 8 mm L= 2m	6
19	LT HRSABK01	Hardware ballast kit for Arc Roof (4 pcs)	1

LIST OF ARC RSA0806ST

Id.	Code	Part description	Quantity
1	LT QX30S350	ST 29 cm square L= 350cm reinforced truss	4
2	LT QX30S250	ST 29 cm square L= 250cm reinforced truss	4
3	LT QX30K8	6 way box corner	6
4	LT QXFC	Quick connection set for Q series	3
5	LT QXKFC	4 special steel half spigot with screw	4
6	LT FP30	Universal 29 cm truss floor plate	4
7	LT QX30SC-00021	ST 29 cm square – Circle 30° section ext. diam cm 1600	6
8	LT RAH257M3P	Brace w/clamps – 157,30 cm long	12
9	LT HIT001AR	Arc's inclination system	6
10	LT HRSH20SET	Rubberband, 20 pcs set	7
11	LT HSA0806W	PVC white cover for 6x4 arc roof	1
12	LT TZ30K01	Assembly tool for half-spigot in 25&29 cm side truss	1
13	LT RGSW1300	10 mm steel wire – 1 ton – 3 meter long	4
14	LT RGSW1600	10 mm steel wire – 1 ton – 6 meter long	2
15	LT RGSS202	2 ton soft steel sling – 1 meter EWL	12
16	LT RGSH325CMK8	8 pcs set of CM Shackle – 5/8" – 3,25 ton – screw pin type	3
17	LT RGBRT25004H	Pull lash strap – 2 ton – 4m w/swiwel hook	6
18	LT RGLCH085404	Load chain 8mm L=4m	6
19	LT HRSABK01	Hardware ballast kit for Arc Roof (4 pcs)	1

5. INSTALLATION PROCEDURE

5.1 INTRODUCTION

The product could be installed and disassembled a lot of times during its service. In order to preserve the functionality, the integrity and the safety of the product, it should be used by fully trained, competent and suitably experienced people and organization in the installation and dismantling operations.

Staging Systems Europe is not responsible for all the things which can happen during the installation of the complete structure. The correct installation of the complete structure is a full responsibility of the installer who must guarantee the correctness of the installation procedure and he has to observe the regulations in force about the security of the work.

5.2 PRELIMINARY CONTROLS OF THE INSTALLATION AREA

Before installing the product, the installation area must respect all the security necessary conditions.
The following conditions must be respected:
The ground of installation must be flat, solid and capable to guarantee the maintenance of the verticality of the tower.
If this condition is not guaranteed, it would be necessary to use wooden boards to divide the load and reduce the specific pressure to the admissible value. The wooden boards must be placed under the supporting points of the tower to the ground. A capable and competent person must evaluate the situation carefully in order to guarantee a correct installation.
Nobody and any obstacles must be present in the working area during the installation, use and dismantling procedures of the product.

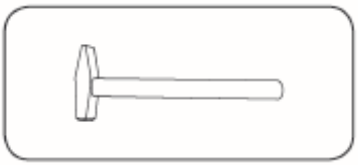
5.3 CONTROL OF THE INTEGRITY OF THE COMPONENTS OF THE PRODUCT

Before any installation of the tower, the good conditions of the components of the product must be verified by a competent person.
Especially:
The trusses, the base of the tower, the sleeve block, the top and the stabilizers not have any deformations, dents and damages.
The pins, the screws and all the mechanical components should not have any signs of corrosion and damages.
If any defects are visible, such as plastic deformations or material reductions of the chords and diagonals of the trusses, cracks in or near weld seams, development of slotted holes at connections or the fittings used to secure them or deformation of connectors, the parts affected should not be installed.
They must be marked in such a way that it is impossible to use them by mistake in the future.
The truss elements must be assembled in the correct assembling position. When two elements of the truss are connected, the diagonal structure must be maintained.

5.4 EQUIPMENT

In order to guarantee the security of the people who install the product and to ensure the correct installation of it, we advice you to follow the installation procedure strictly as it is indicated in the following pages. It is necessary to use plastic or copper hammers, in order to avoid damages to the product.

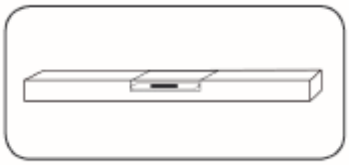
A list of tools and protective clothes follows:



Plastic or copper hammer

Safety shoes

Protective gloves



Spirit level

We advice you to use any different instruments and/or protective clothes requested by laws and/or national regulations about the industrial safety.

5.5 LEGEND

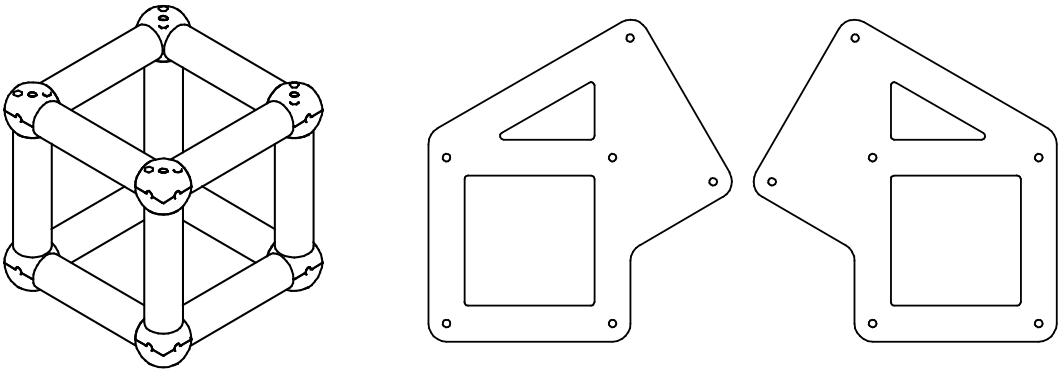
The installation procedure described in the following pages is about the product "Arc Roof RSA0604ST and RSA0806ST".
In order to guarantee an easy use and understanding, the procedure has been divided in different sections of steps. The following table shows the sections to be followed as regards the model of structure to construct.

STEP RANGE	Page	RSA0604ST	RSA0806ST
From step 1 to step 3	20-23	√	√
From step 4 to step 8	24-33	√	
From step 9 to step 13	34-42		√
Step 14	43-44	√	
Step 15	45-46		√
Step 16	47-48	√	√
Step 17	49-50	√	√

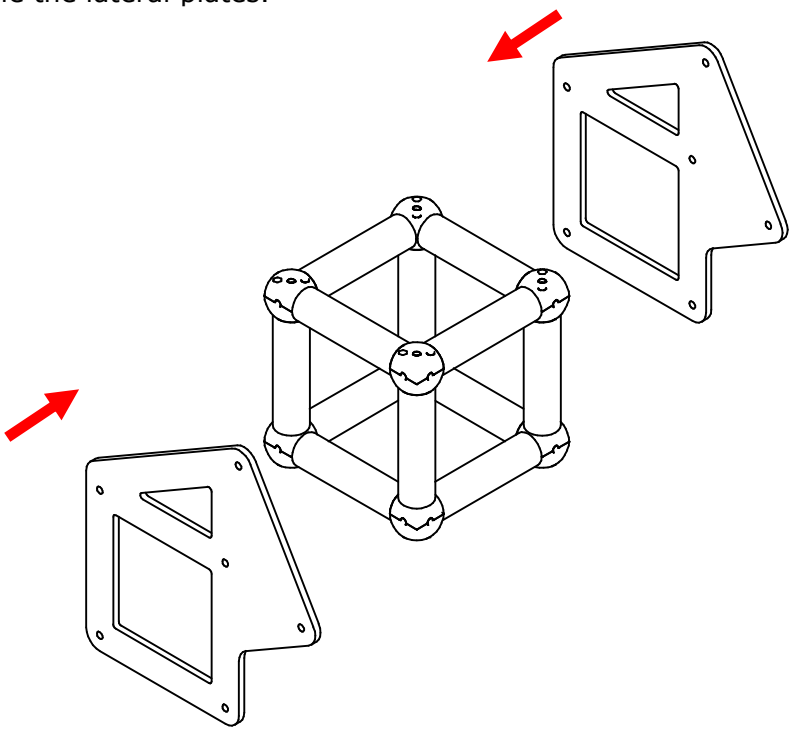
5.6 INSTALLATION PROCEDURE

Step 1 RSA0604ST and RSA0806ST: Assemble LT HIT001AR to the LT QX30K8 Dado.

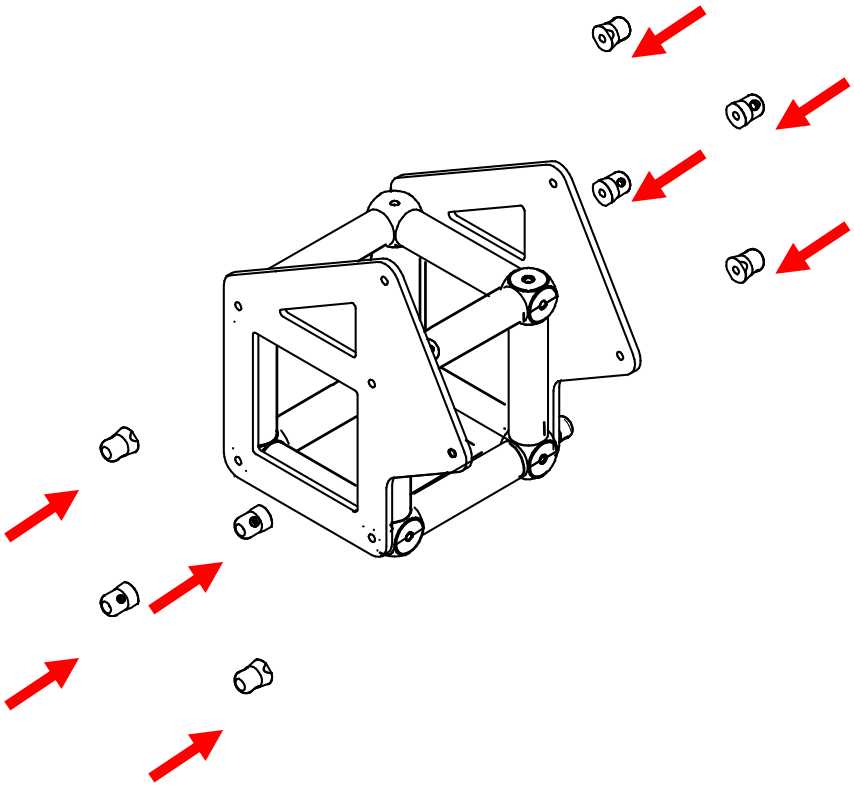
a) Select the components: cube LT QX30K8 and lateral plates from the LT HIT001AR.

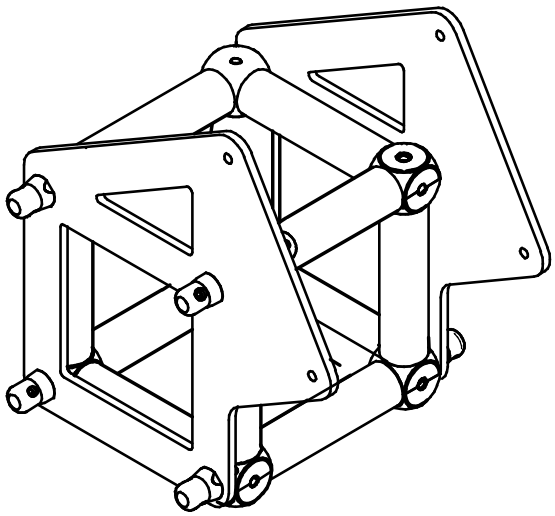


b) Assemble the lateral plates.

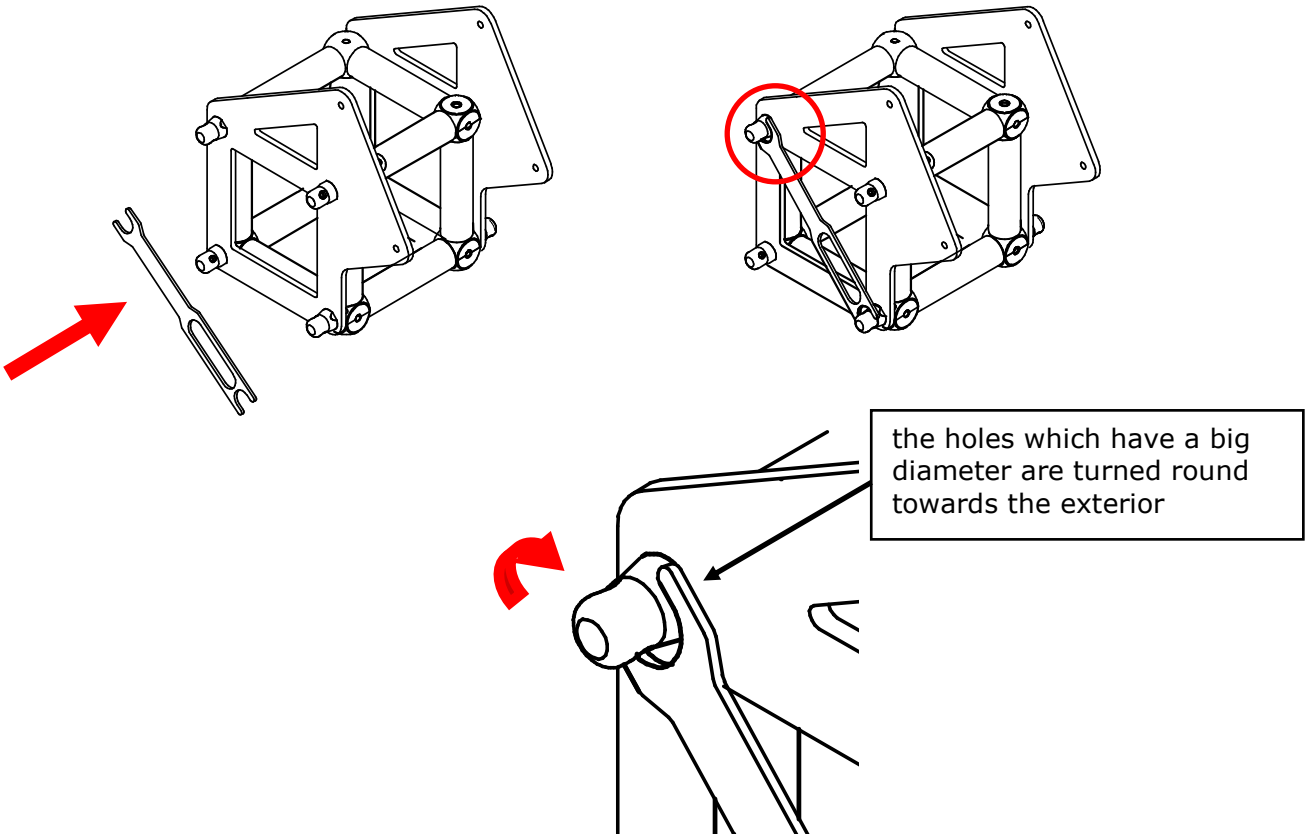


c) Assemble the half spigots from the LT HIT001AR.

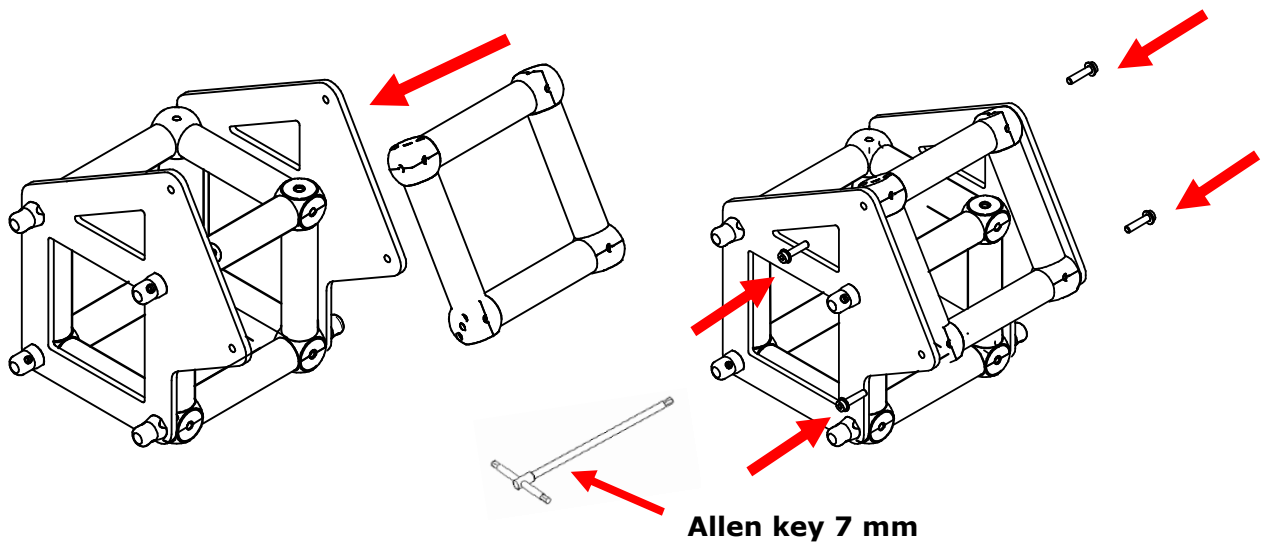




d) Use the key from the LT TZ30K01 in order to orientate the spigots along the diagonal. Tighten the screws using a hexagonal key.

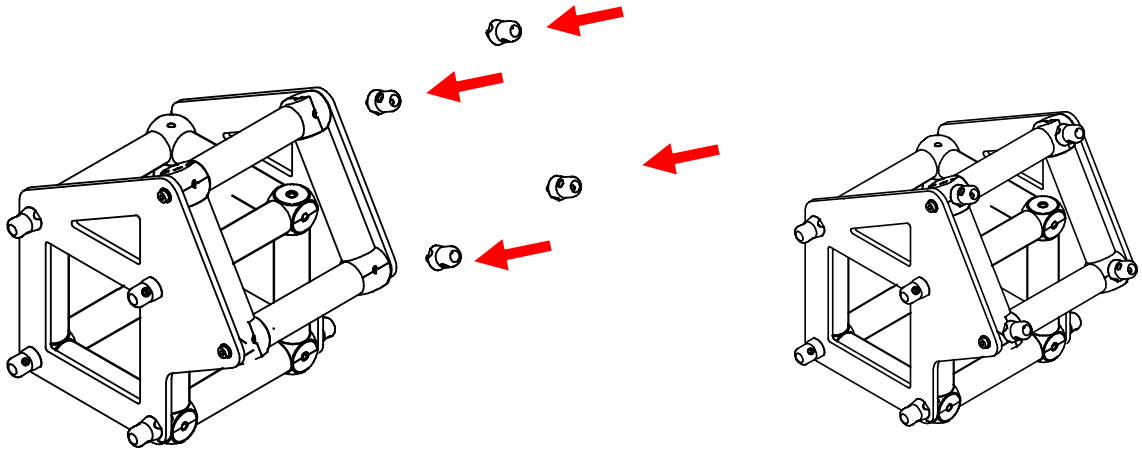


Step 2 RSA0604ST and RSA0806ST: Insert the LT FX30K4, on the free face. Then fix it tightening the screws (screw M10 X 45 TCEI flatted).

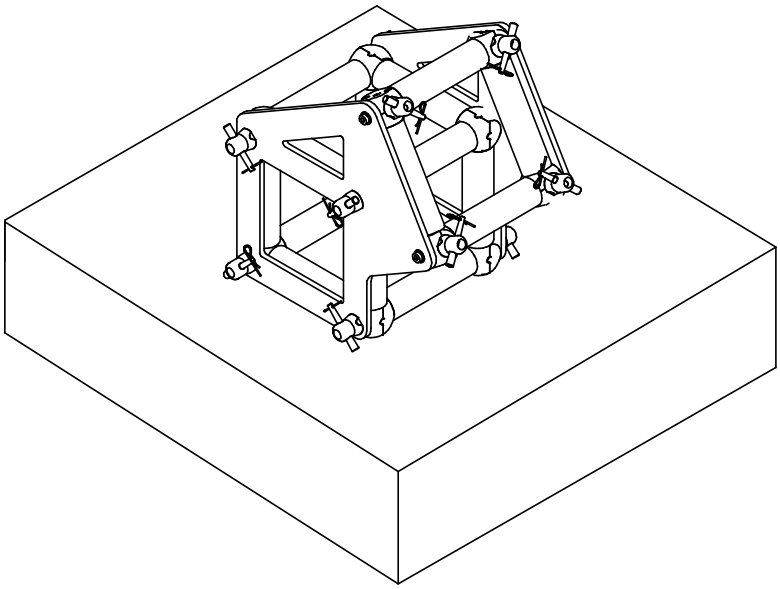


Step 3 RSA0604ST and RSA0806ST: Connect the half spigots to the flat Dado tightening the M10 screws, repeat the procedure at the step number 1, d).

a) Insert the half spigots.

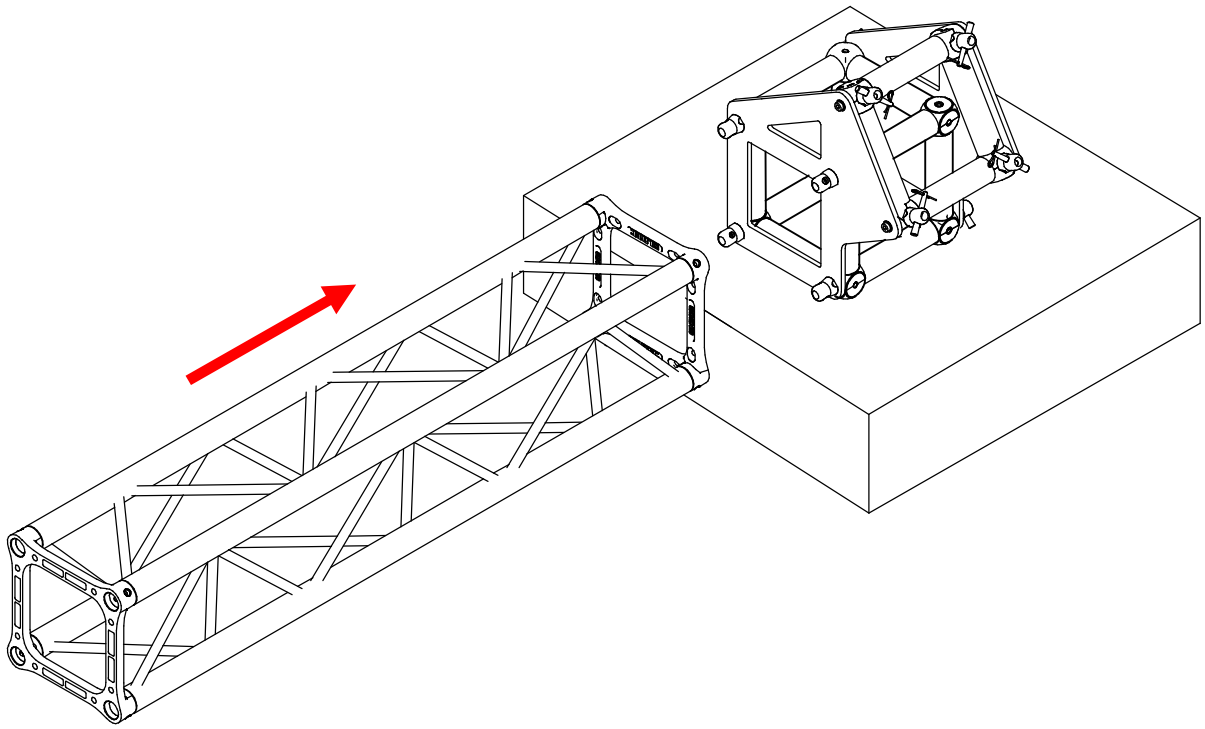


b) Then put it on a support.

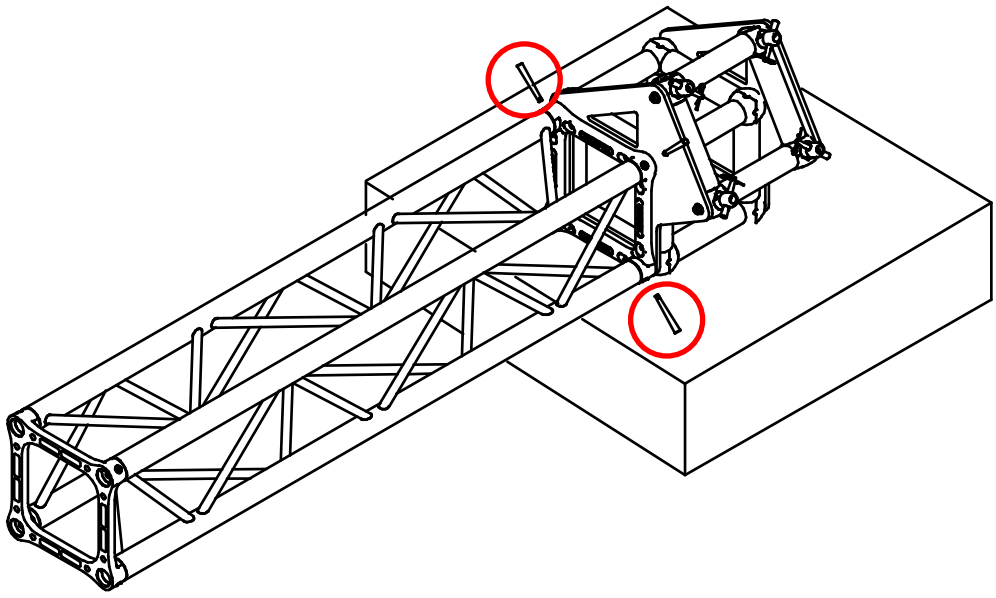


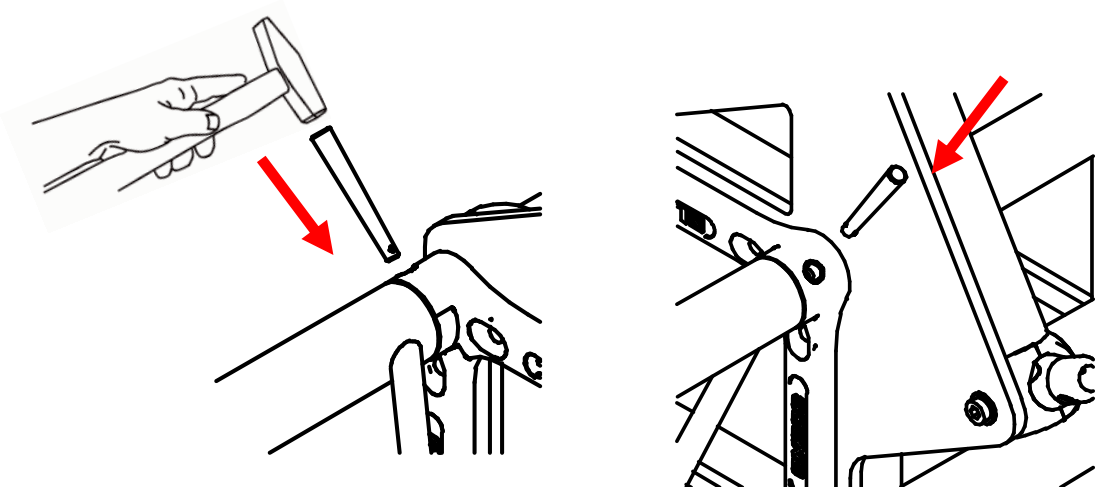
Step 4 RSA0604ST: assemble the first truss LT QX30S150.

a) Bring the truss near the cube and insert this in the half spigots.

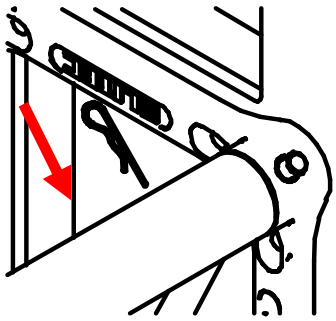


b) Connect the truss using the pins and split pins.

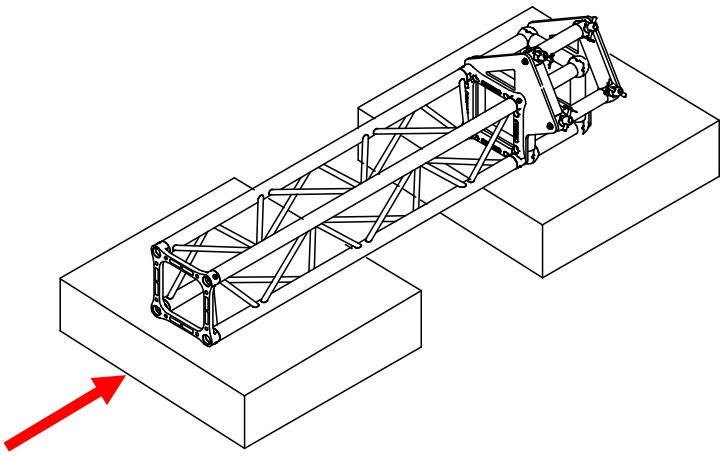




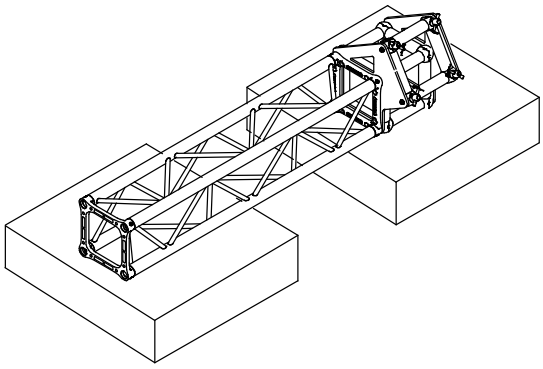
c) Block the pins by the split pins.



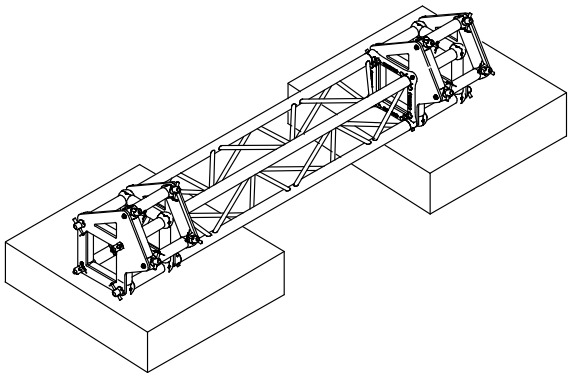
d) Apply a second support under the truss LT QX30S150.



Step 5 RSA0604ST: apply a second cube LT HIT001AR (repeat the steps from number 1 to number 3) to the LT QX30K8 Dado.



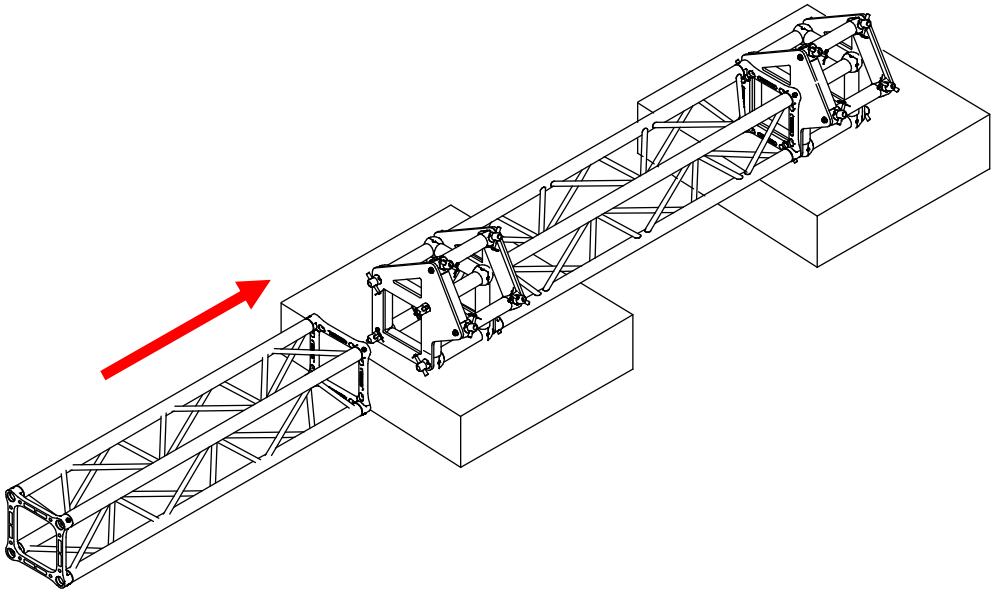
Before



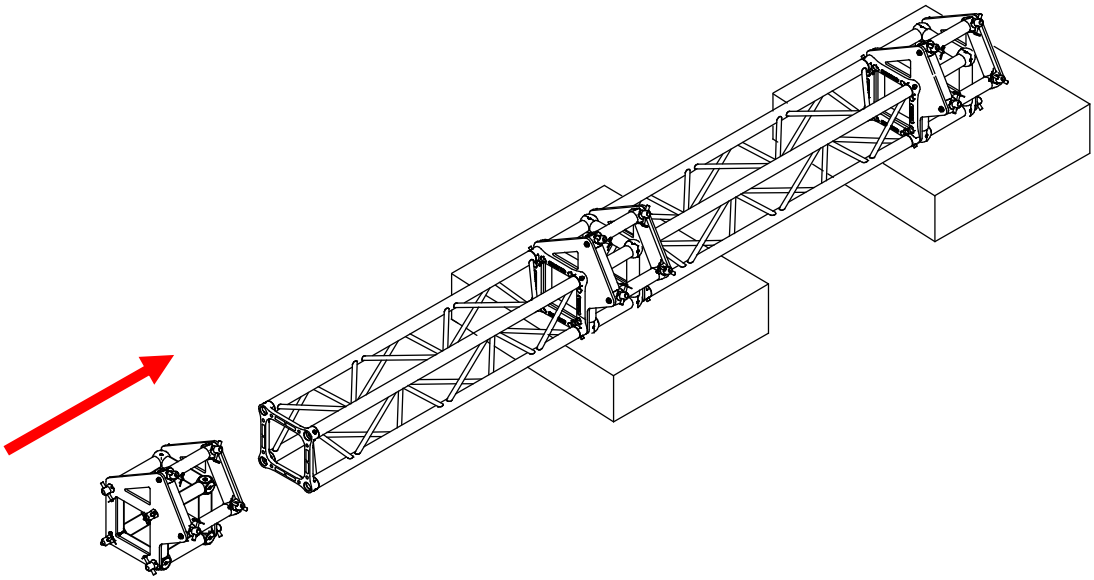
After

Step 6 RSA0604ST: Apply the second truss LT QX30S150 at the second assembled corner

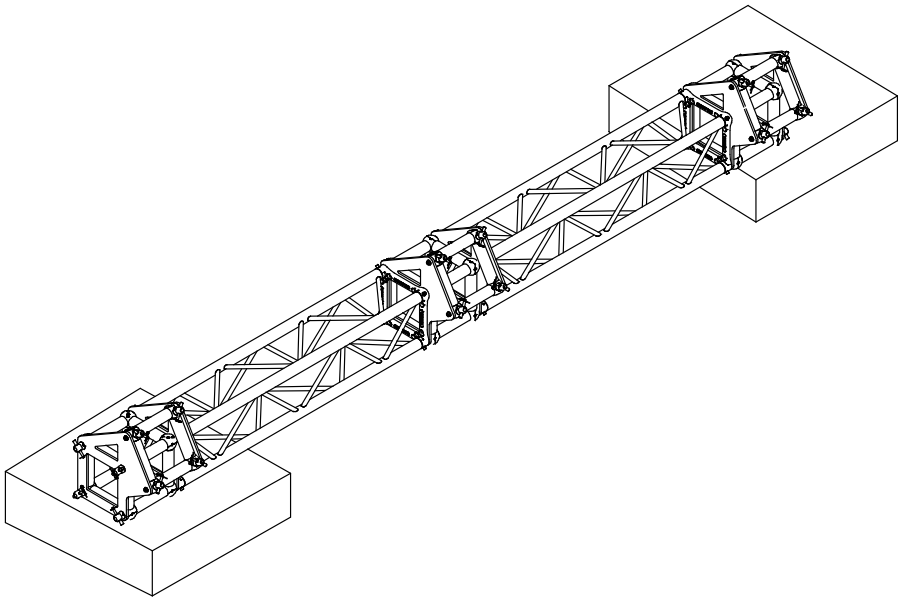
a) Bring the second truss LT QX30S150 near the second assembled corner.



b) Bring the third assembled corner near the second truss LTQX30S150.

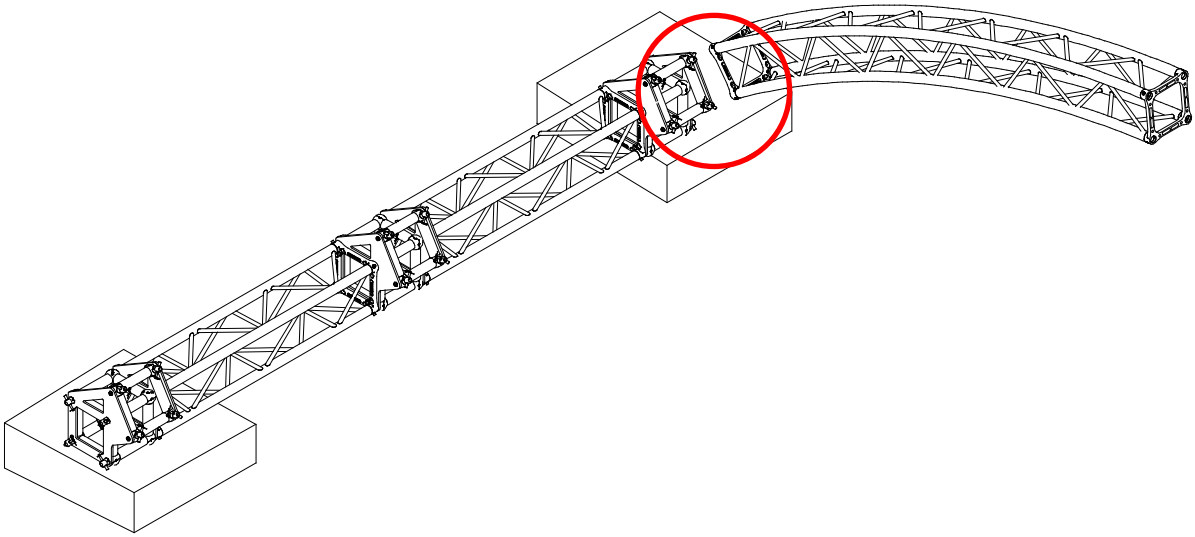


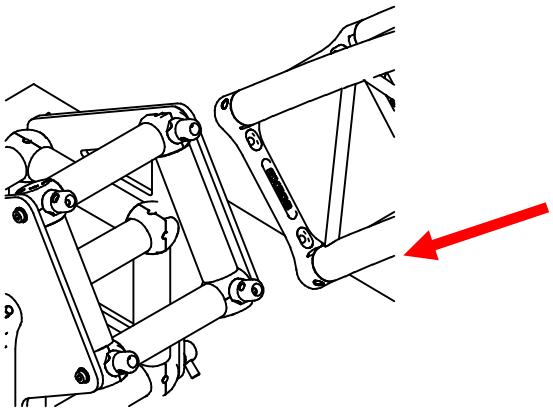
c) Complete the side. Block the trusses and assembled corner using pins and split pins.

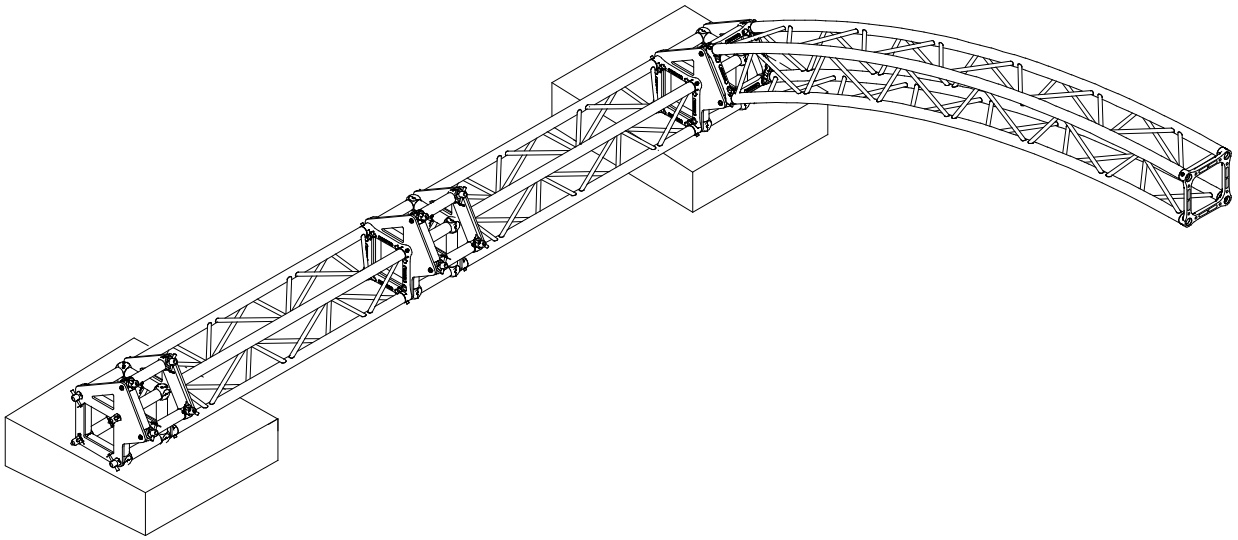


Step 7 RSA0604ST: Construction of the superior arches.

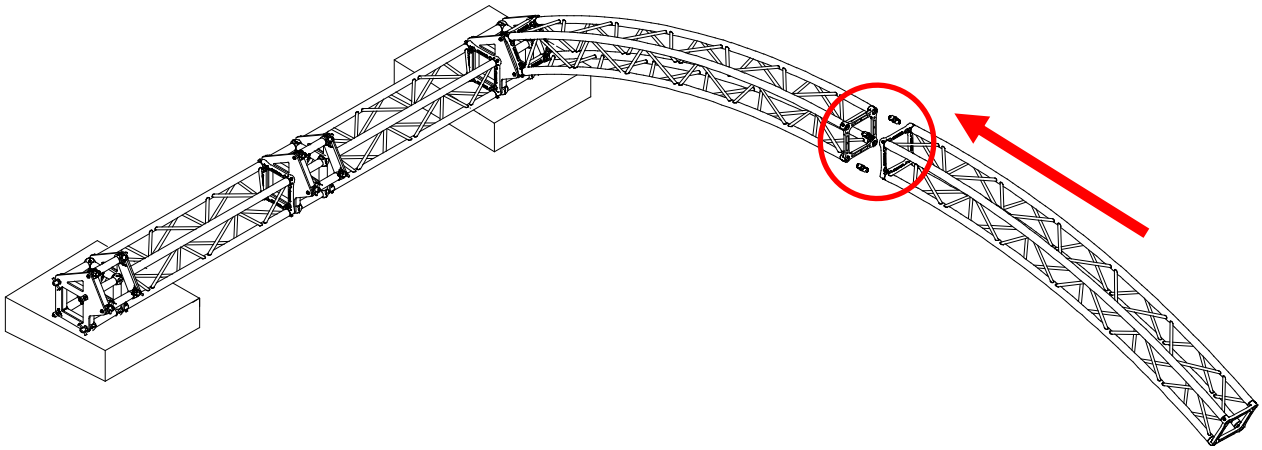
a) Apply the first arch LT QX30SC-00019 to the assembled corner using of the half-spigots and the pins. Then, fix it by the split pin.



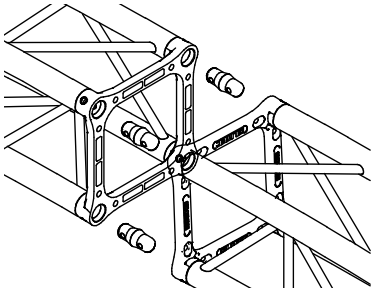


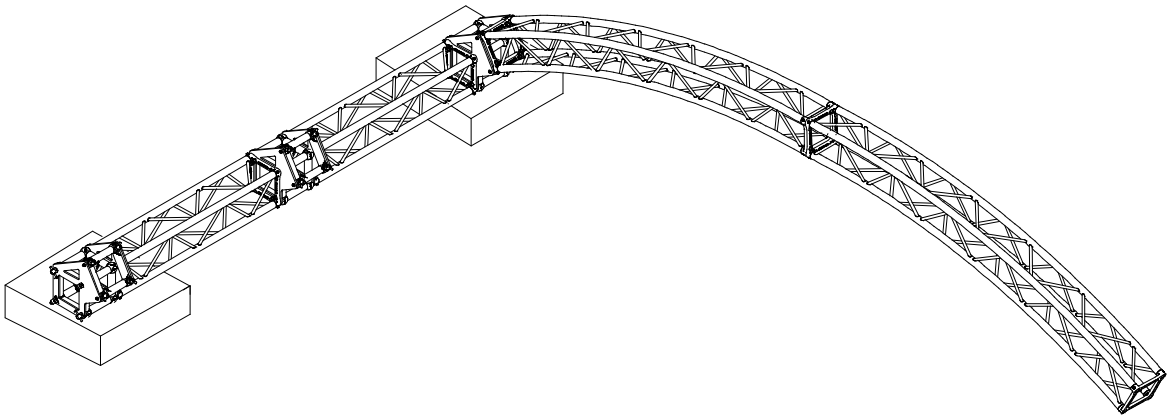


b) Insert the second arch LT QX30SC-00019 and connect it to the free side of the previous arch using the double spigots.



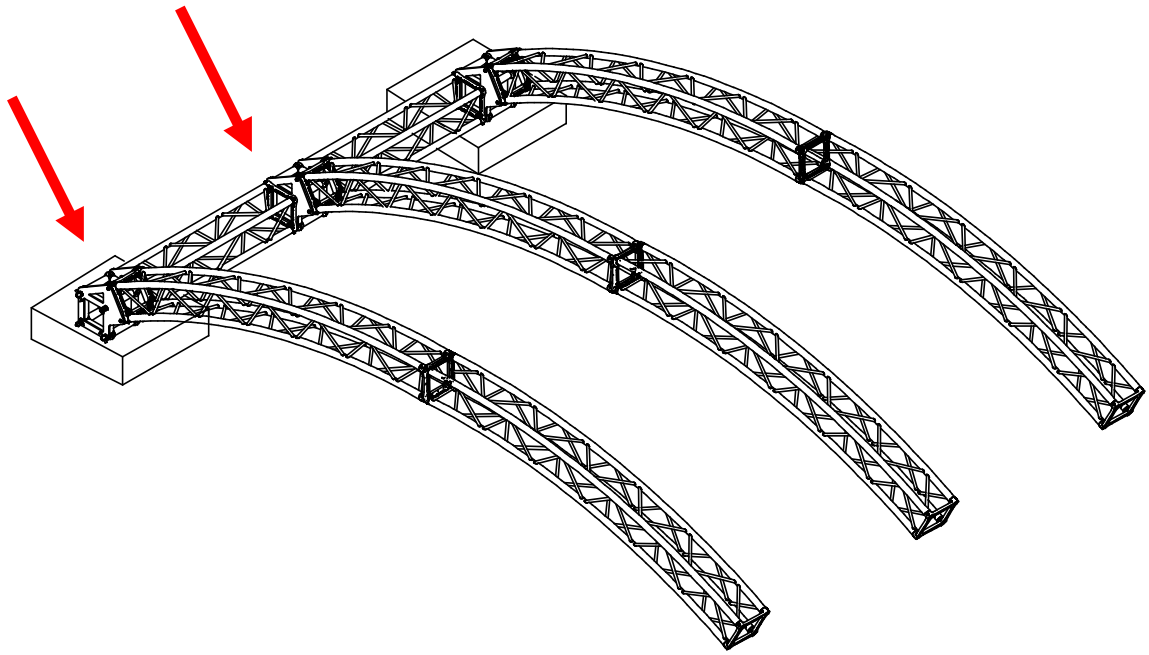
Before





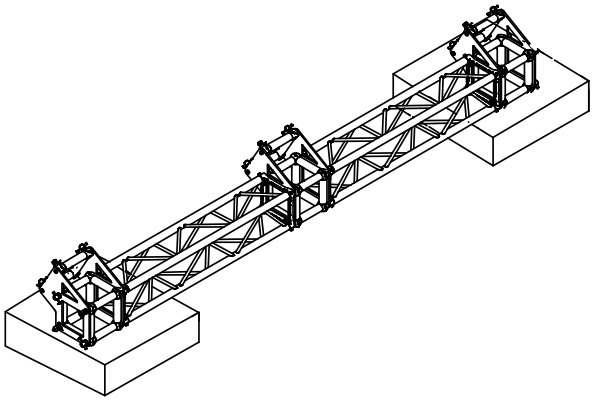
After

c) Repeat the points a) and b) and complete the arches on the other two cubes.

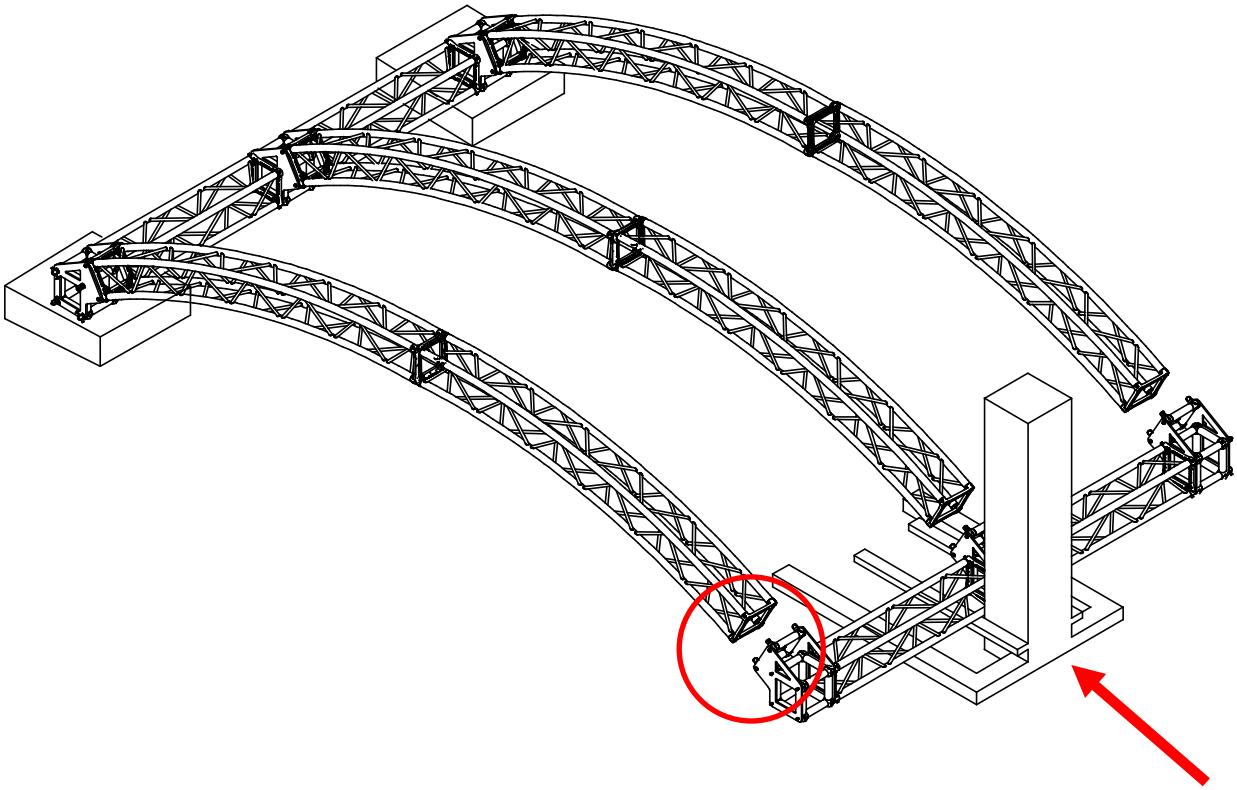


Step 8 RSA0604ST: Complete the top part of the RSA0604ST.

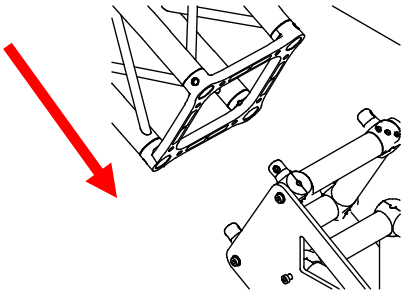
a) Construct the second side of the RSA0604ST, repeat the previous passages from step 1 to step 5.



b) Erect the assembled trusses by a lifting device or by a crane, and bring the last side constructed near the roof.

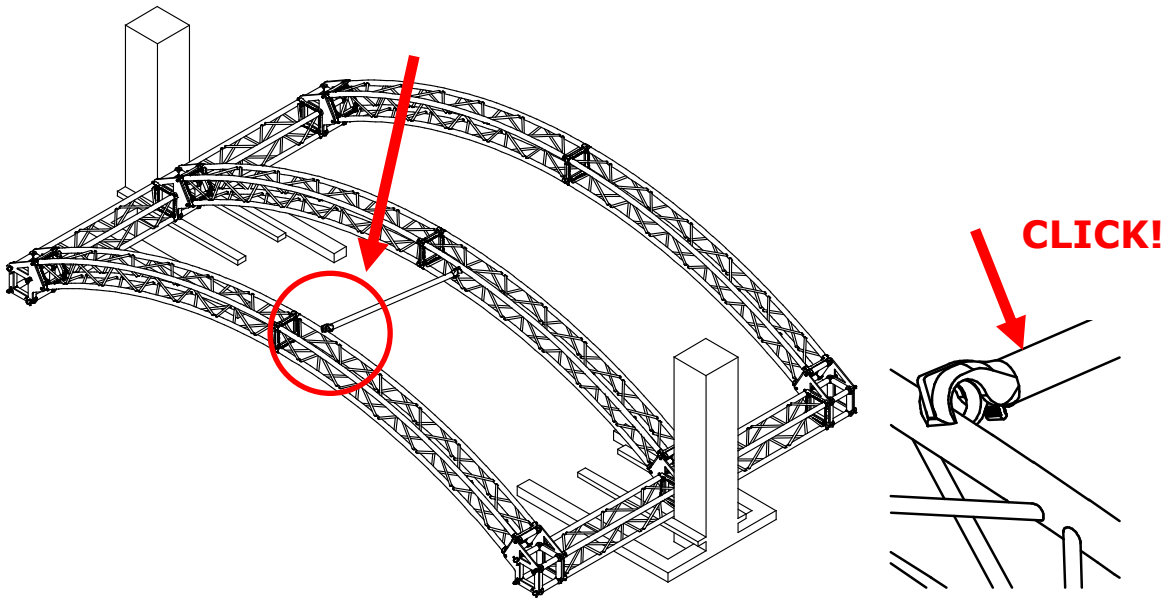


c) Connect the half-spigots of the assembled corners of the new side to the free section of arch.

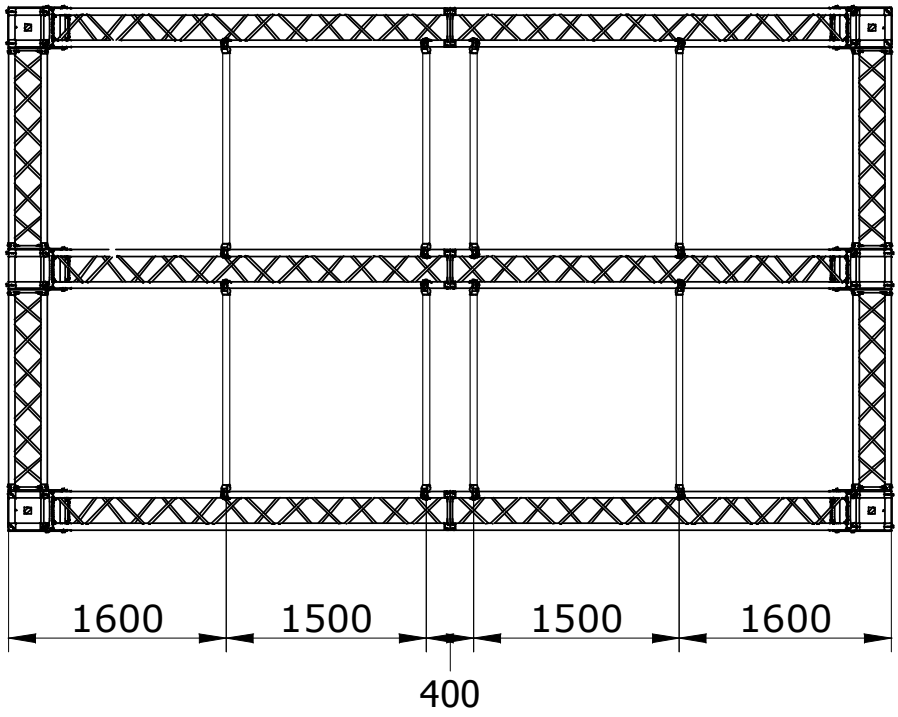


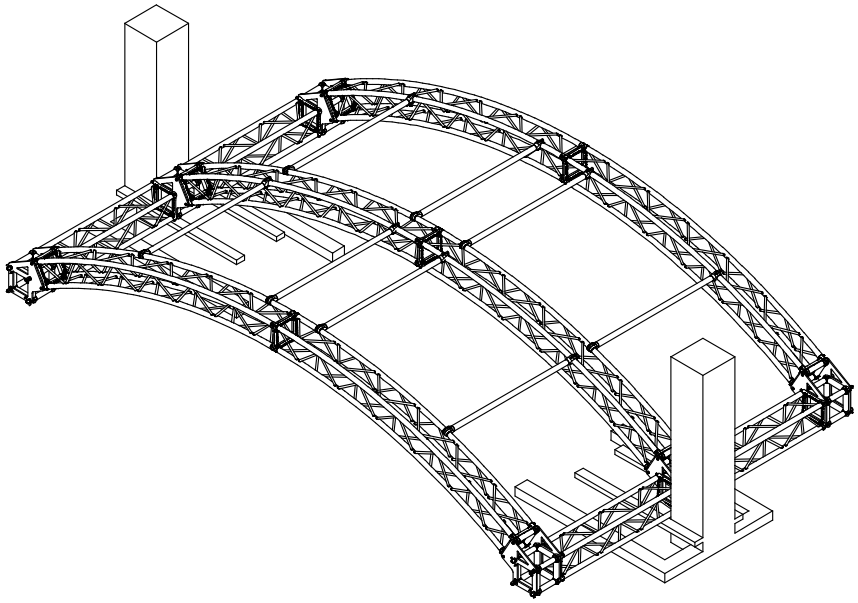
WARNING. **Attention**: Nobody must be present in the working area during the lifting operations. Use a spirit-level to control the truss verticality and the horizontality.

d) Place the snap braces LT RAH157M3P which link together the arches. Press the connection fork until a "click" sound is heard.



Apply the snap braces respecting the distances of the picture below:





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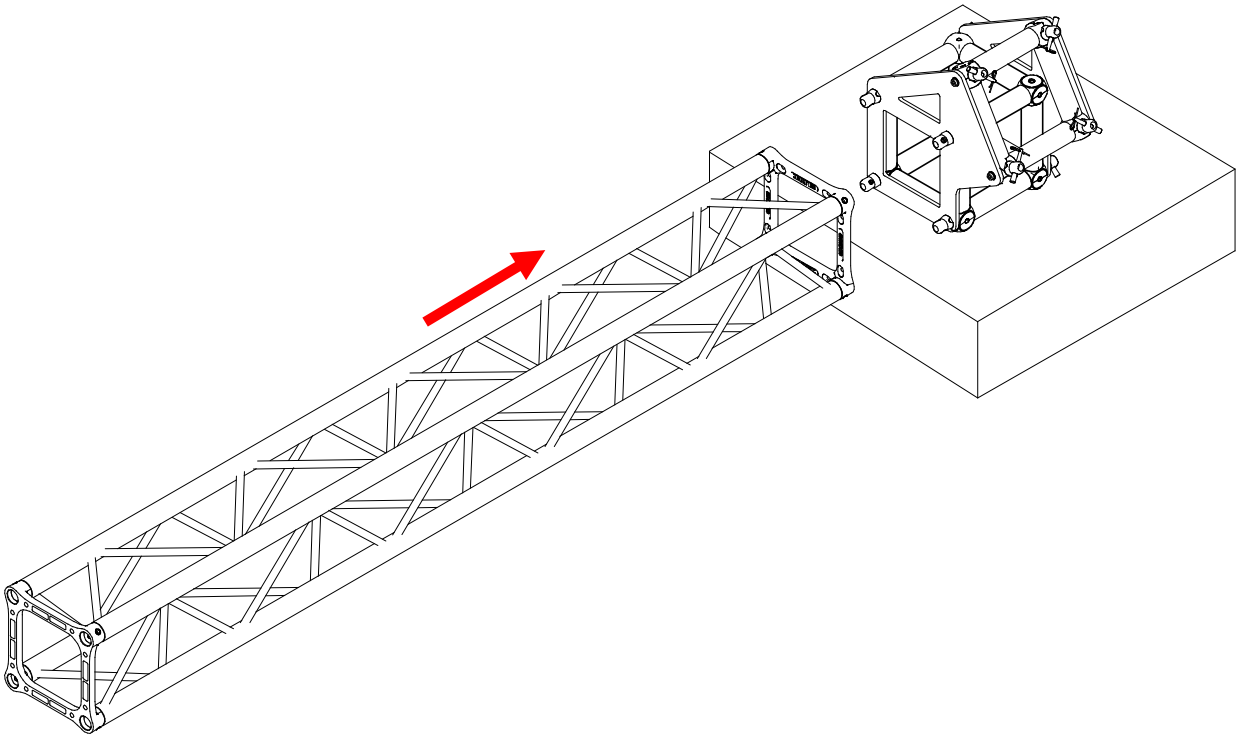
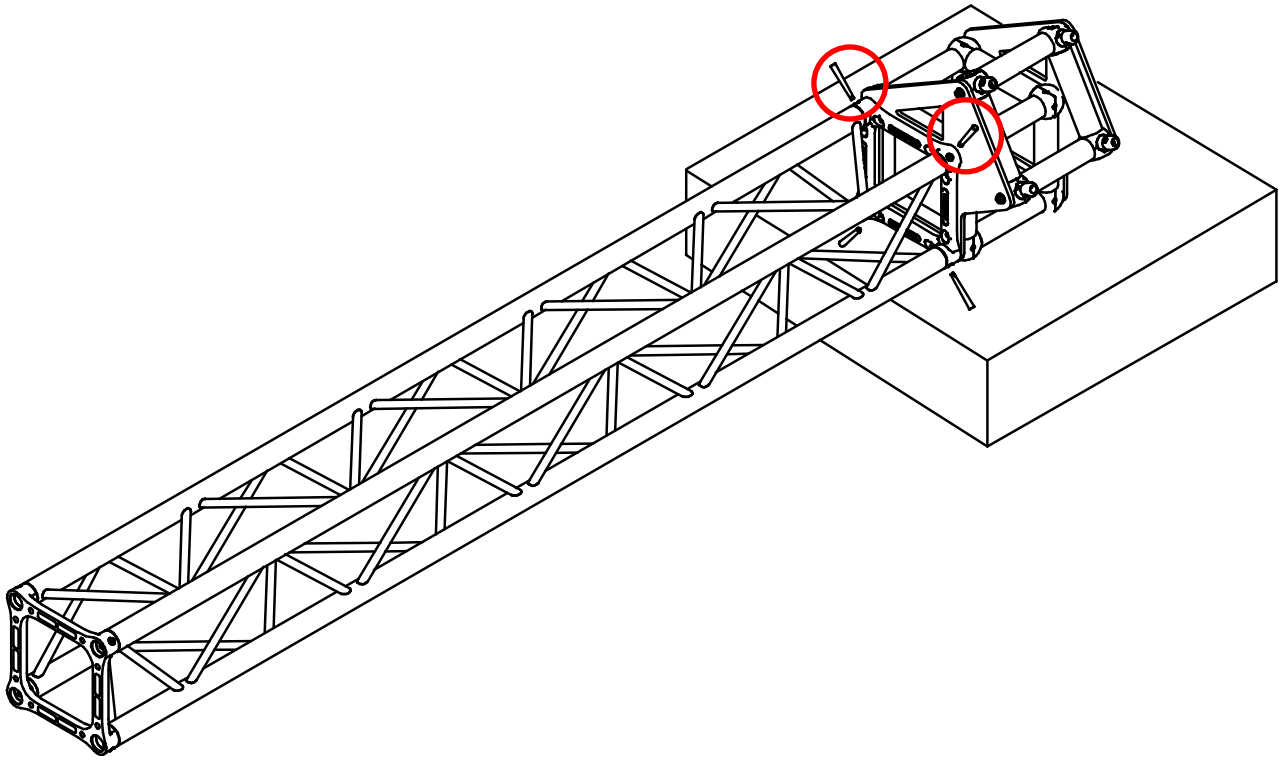
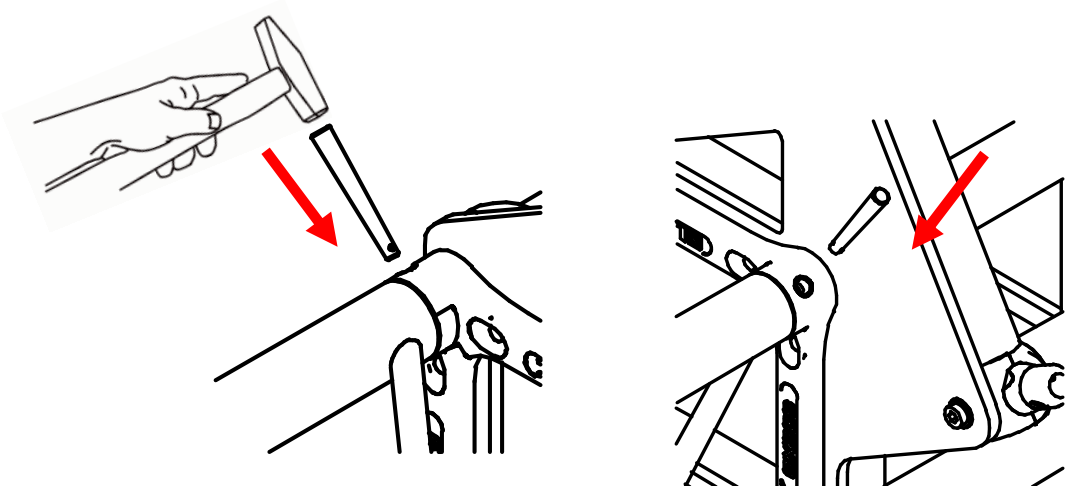
Step 9 RSA0806ST: assemble the first truss LT QX30S250.

a) Bring the truss near the cube and insert this at the half spigots.

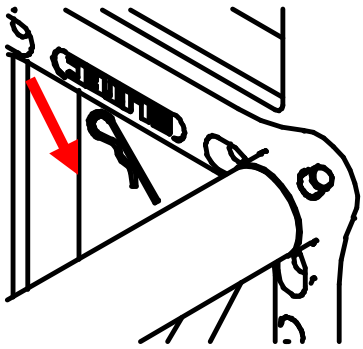


b) Connect the truss using the pins and the split pins.

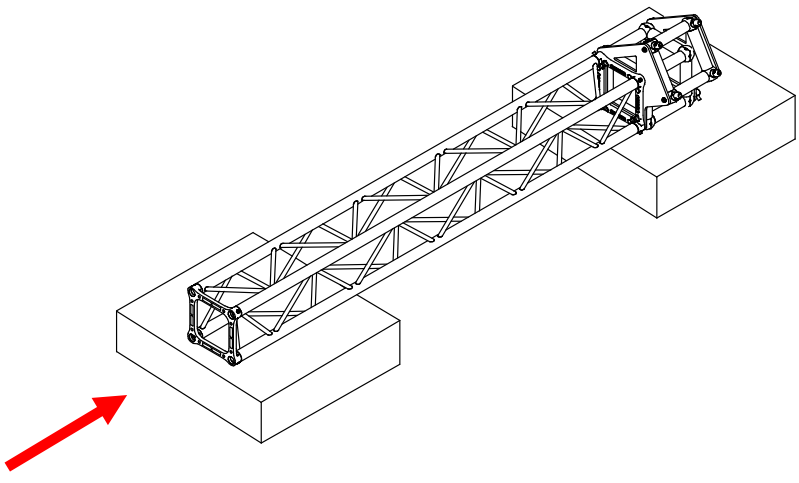




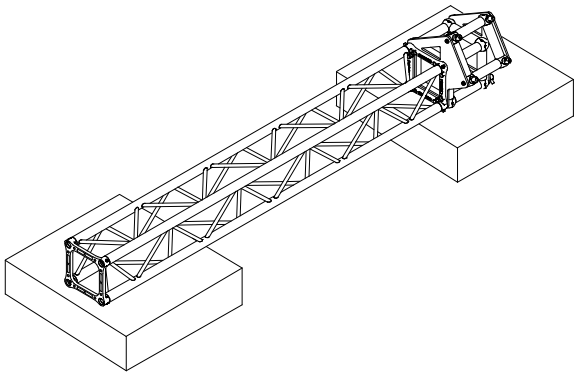
c) Block the pins with the split pins.



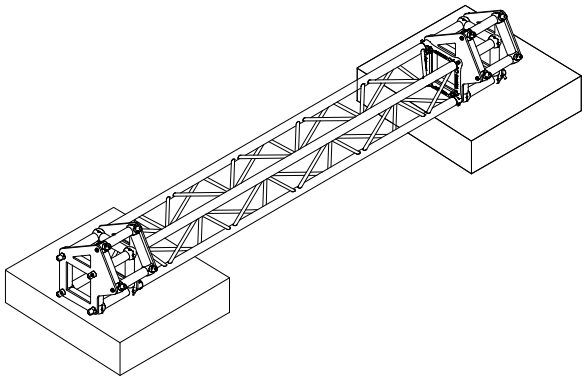
d) Apply a second support under the truss LT QX30S250.



Step 10 RSA0806ST: Apply a second cube LT HIT001AR (repeat the steps from number 1 to number 3) to the LT QX30K8 Dado.



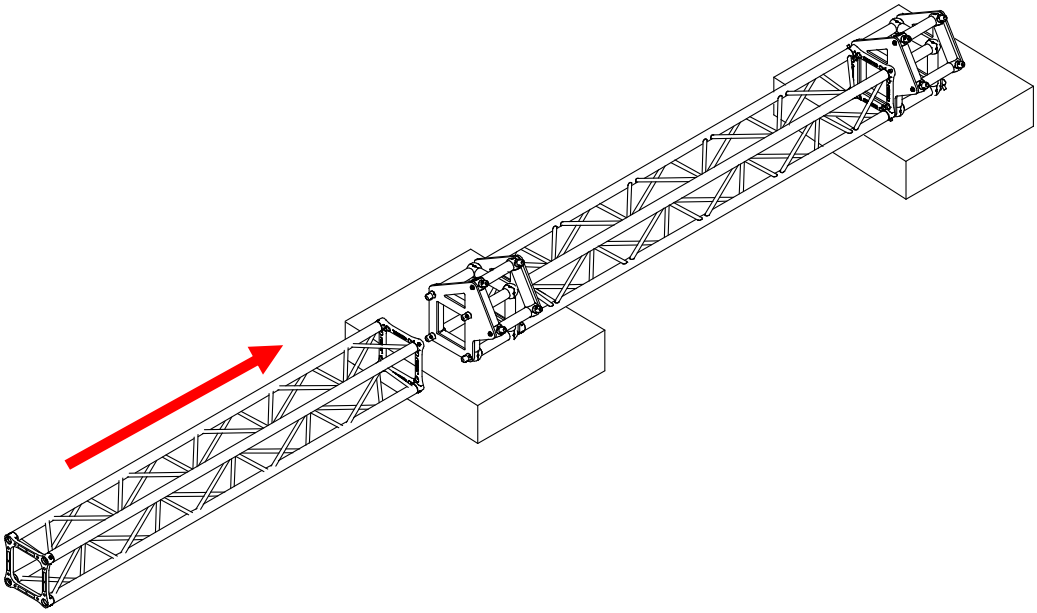
Before



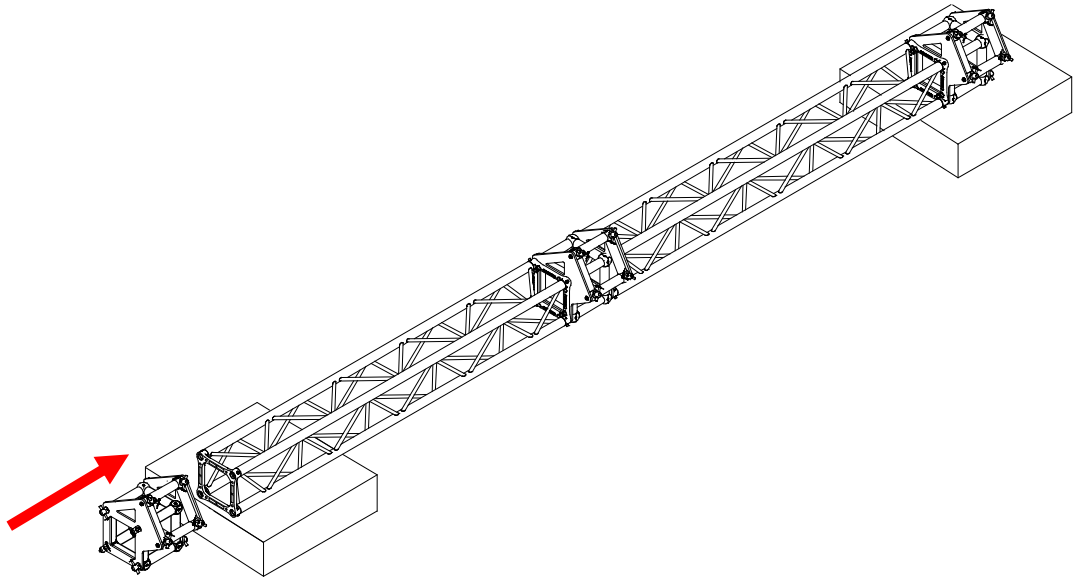
After

Step 11 RSA0806ST: Apply the second truss LT QX30S250 at the second assembled corner.

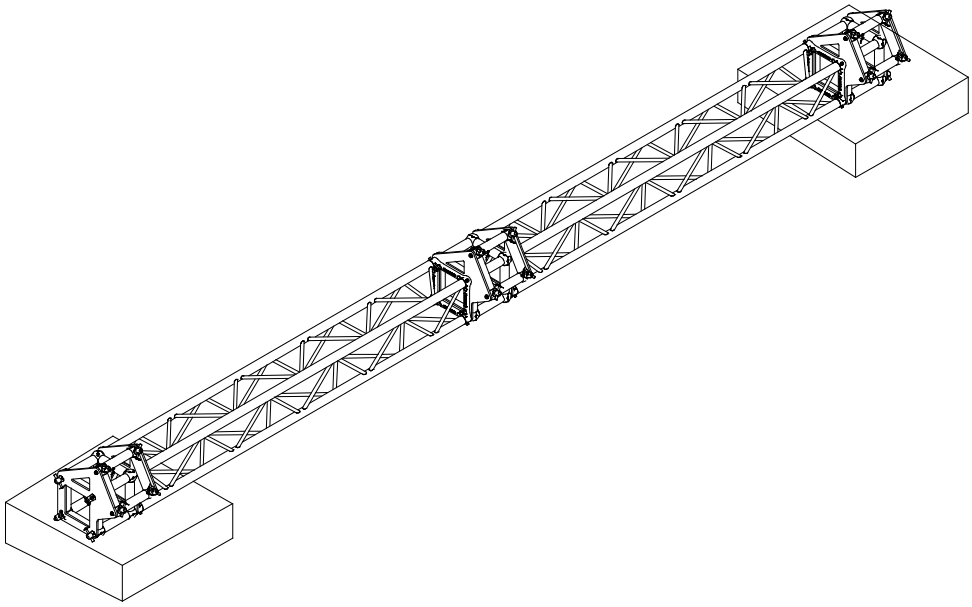
a) Bring the second truss LT QX30S250 near the second assembled corner.



b) Bring the third assembled corner near the second truss LTQX30S150.

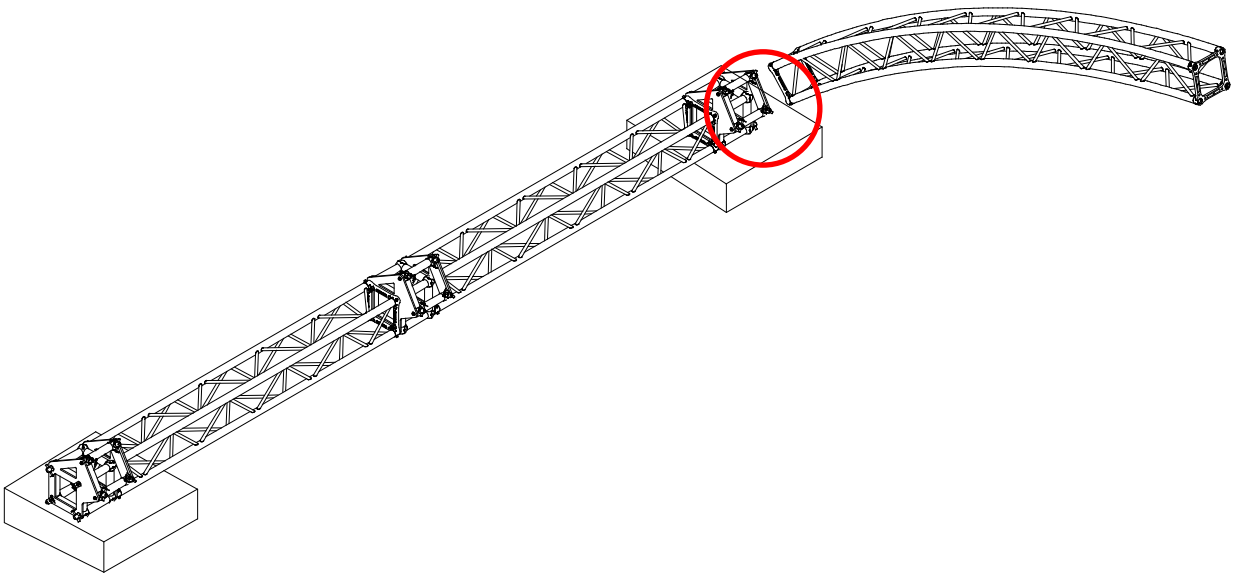


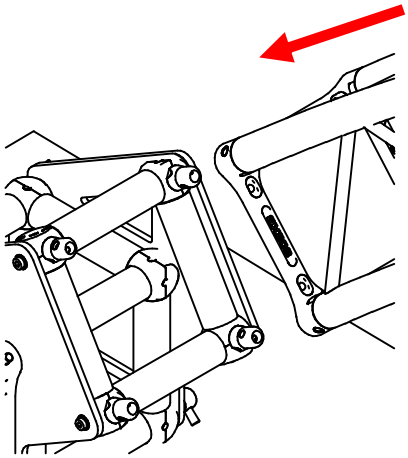
c) Complete the side. Block the trusses and assembled corner using pins and split pins.



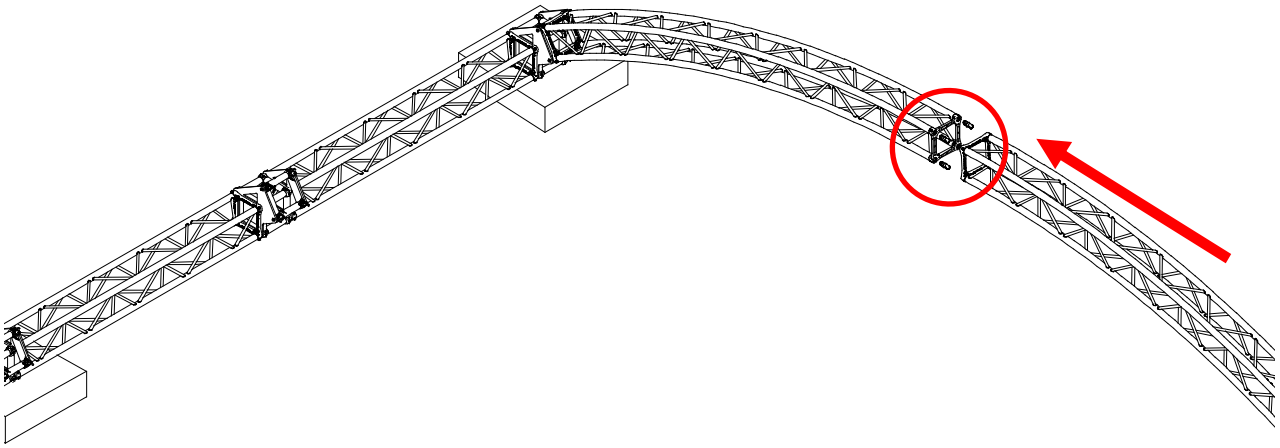
Step 12 RSA0806ST: Construction of the superior arches.

a) Apply the first arch LT QX30SC-00021 to the assembled corner using of the half-spigots and the pins. Then, fix it by the split pin.

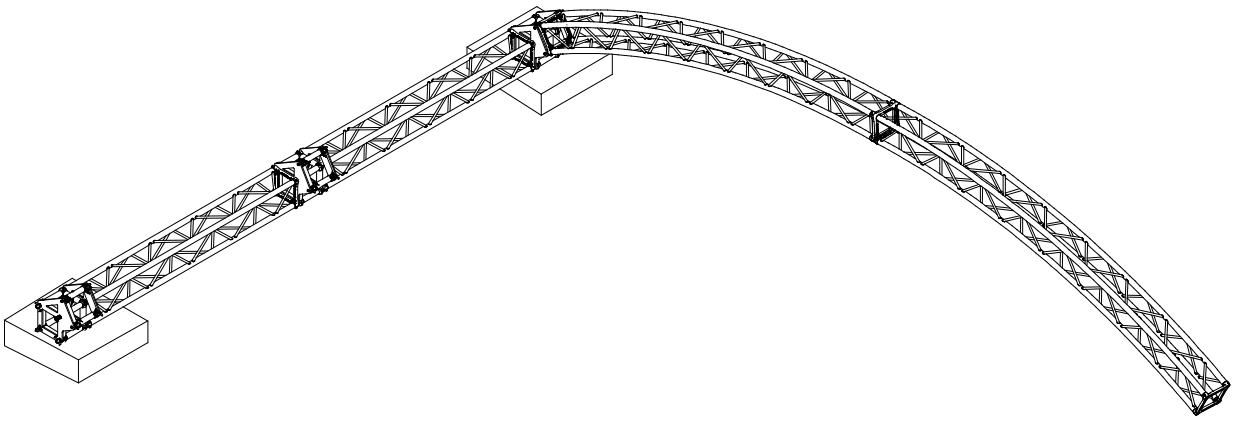




b) Insert the second arch LT QX30SC-00021 and connect it to the free side of the previous arch using the double spigots.

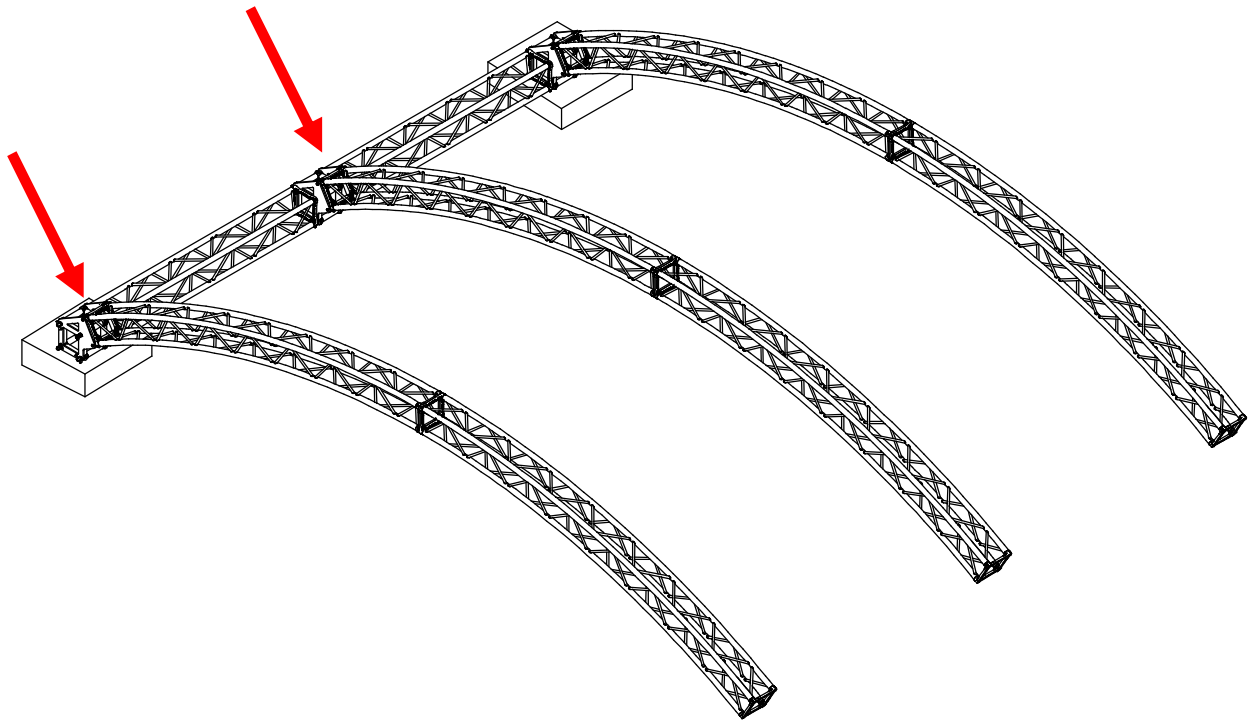


Before



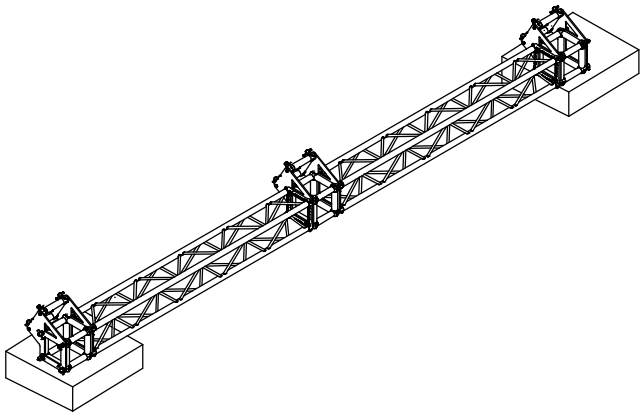
After

c) Repeat the points a) and b) and complete the arches on the other two cubes.

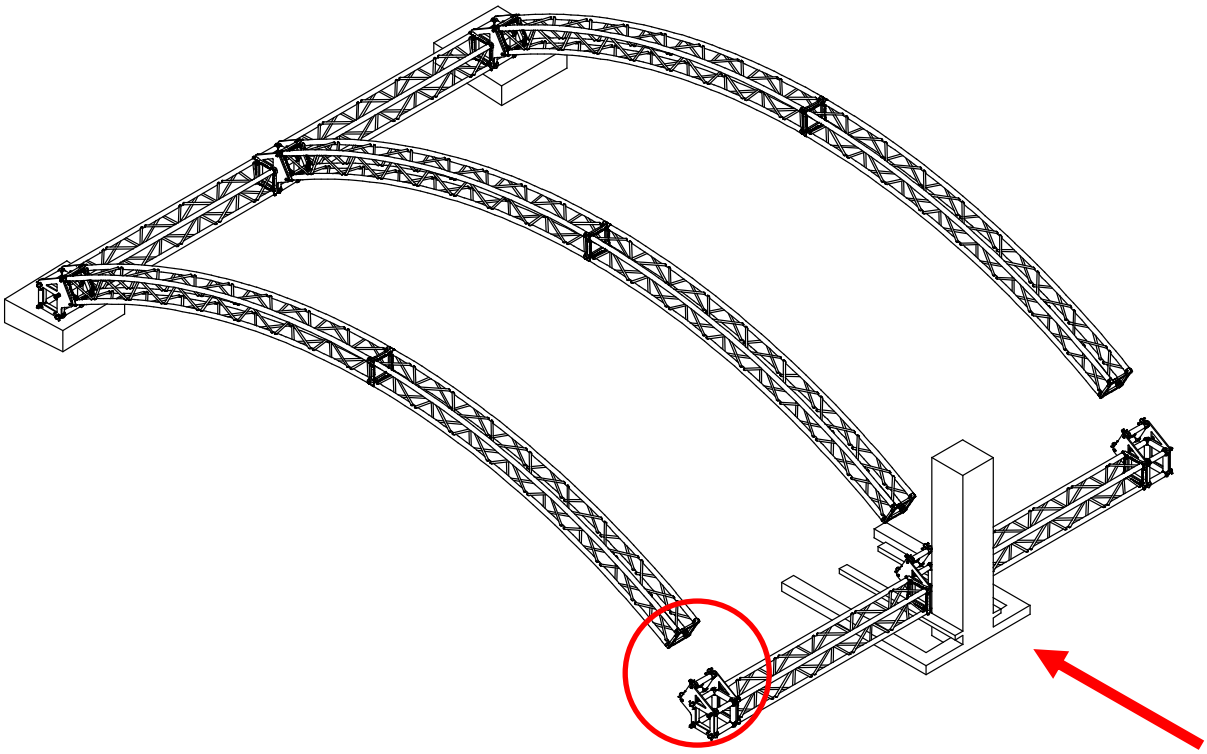


Step 13 RSA0806ST: Complete the top part of the RSA0806ST.

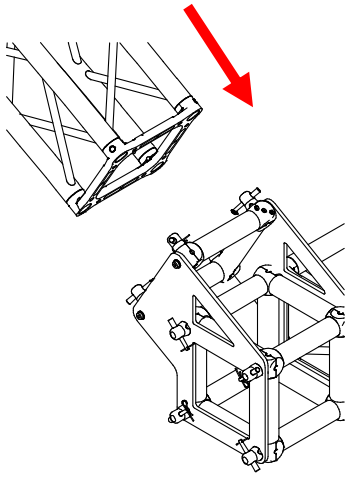
a) Construct the second side of the RSA0806ST repeat the previous passages from step 1 to step 5.



b) Erect the assembled trusses by a lifting device or by a crane, and bring the last side constructed near the roof.

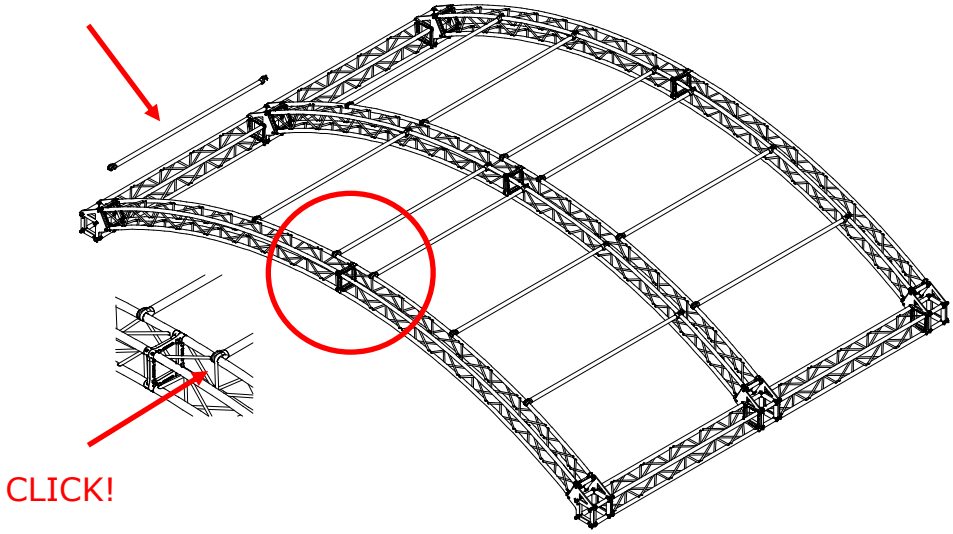


c) Connect the half-spigots of the assembled corner of the new side to the free section of arch.

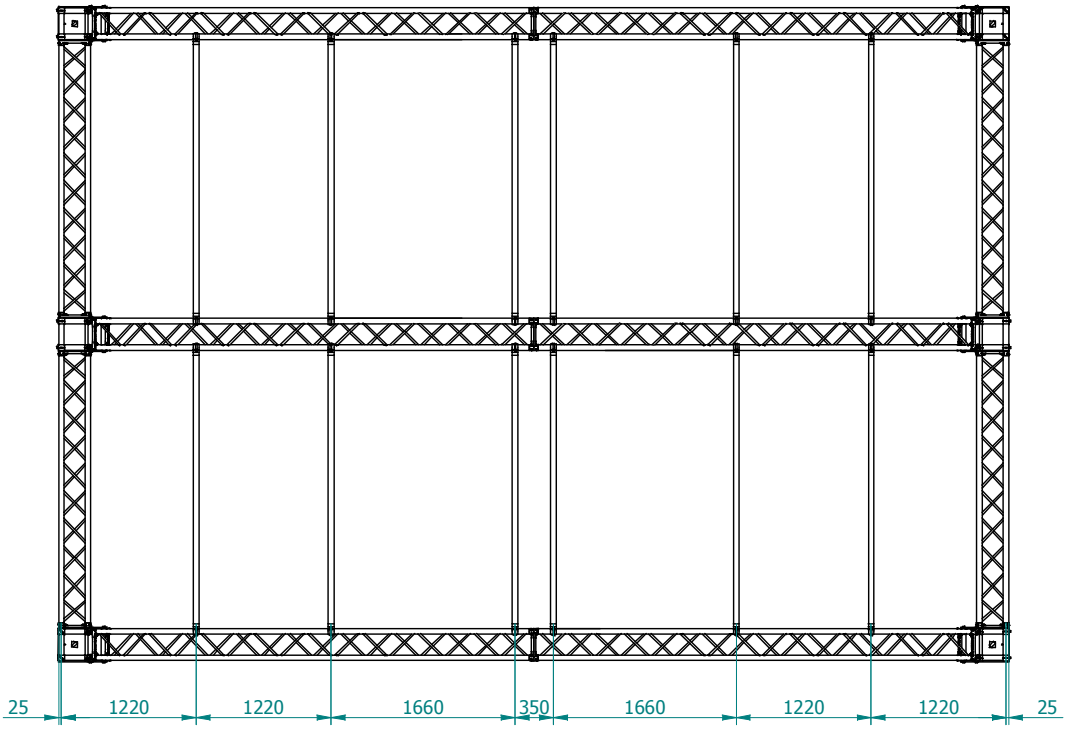


WARNING. **Attention**: Nobody must be present in the working area during the lifting operations. Use a spirit-level to control the truss verticality and horizontality.

d) Place the snap braces LT RAH257M3P which link together the arches. Press the connection fork until a "click" sound is heard.



Apply the snap braces respecting the distances of the picture below:



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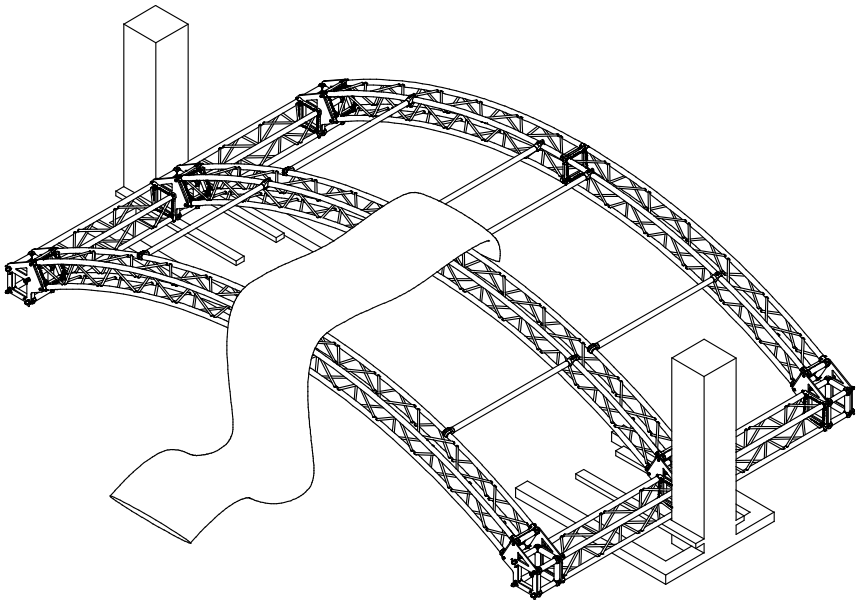
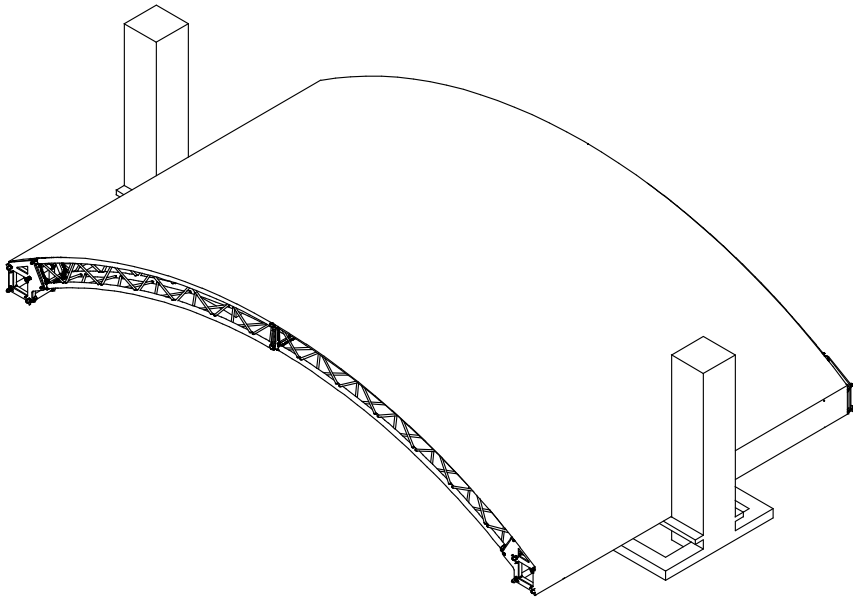
Step 14 RSA0604ST: roof canopy setup.

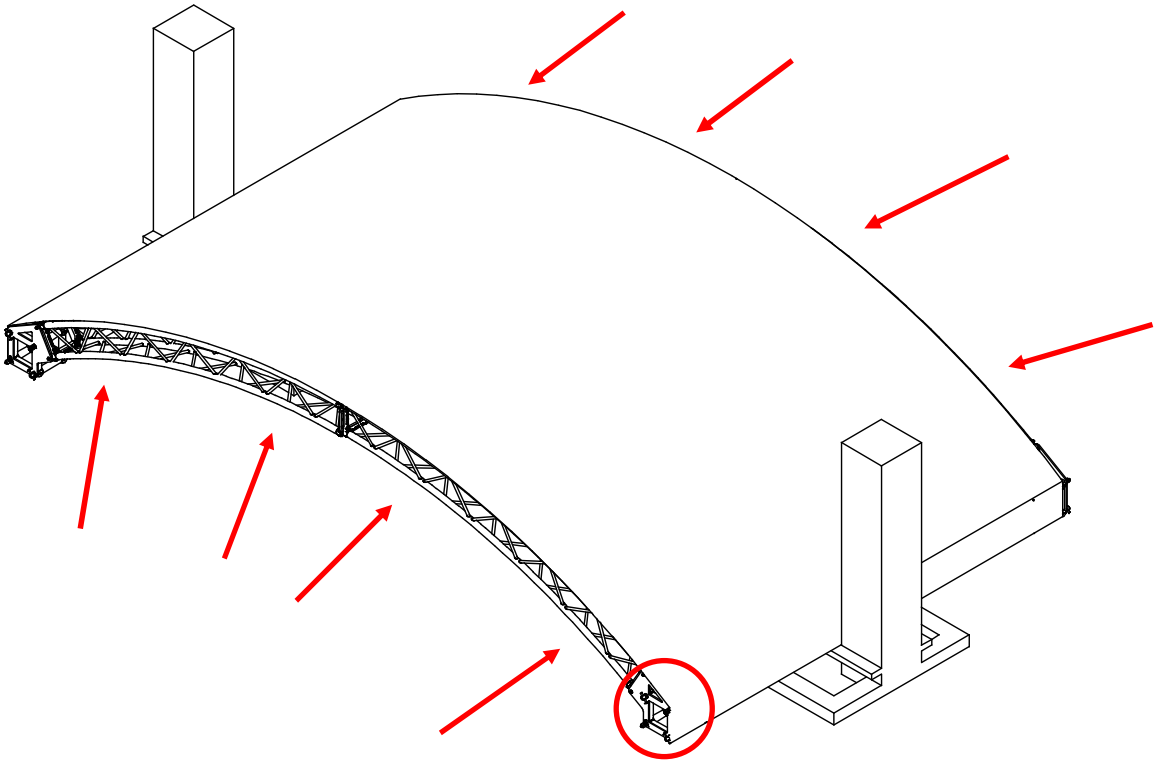
a) Bring the canopy on the top of the structure.

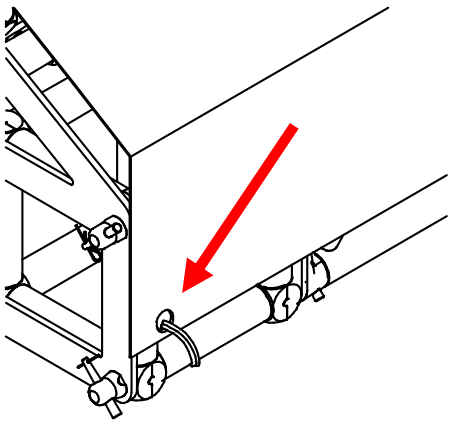


b) Spread out the canopy on the truss structure.



c) Fix the canopy to the structure using the rubberband (LT HRSH20SET) supplied with the components.

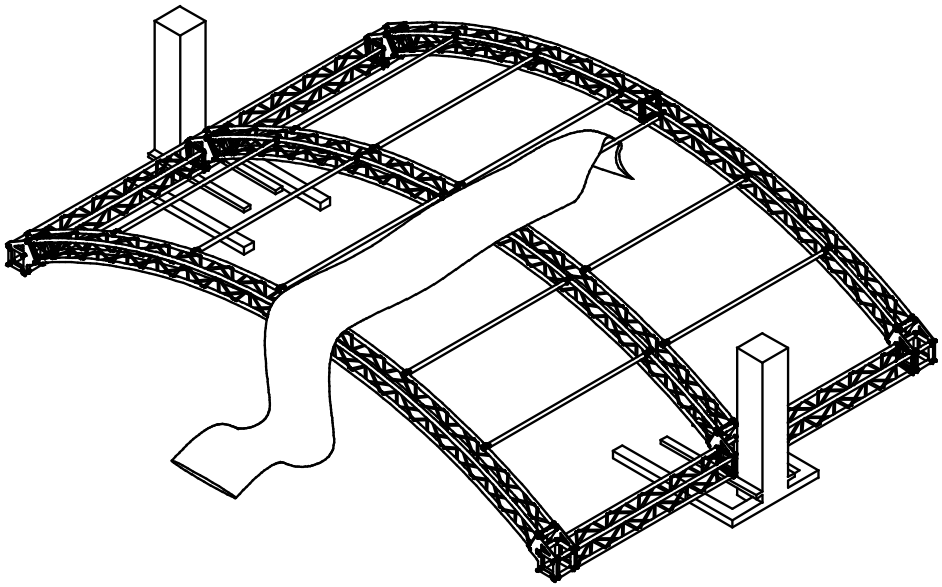




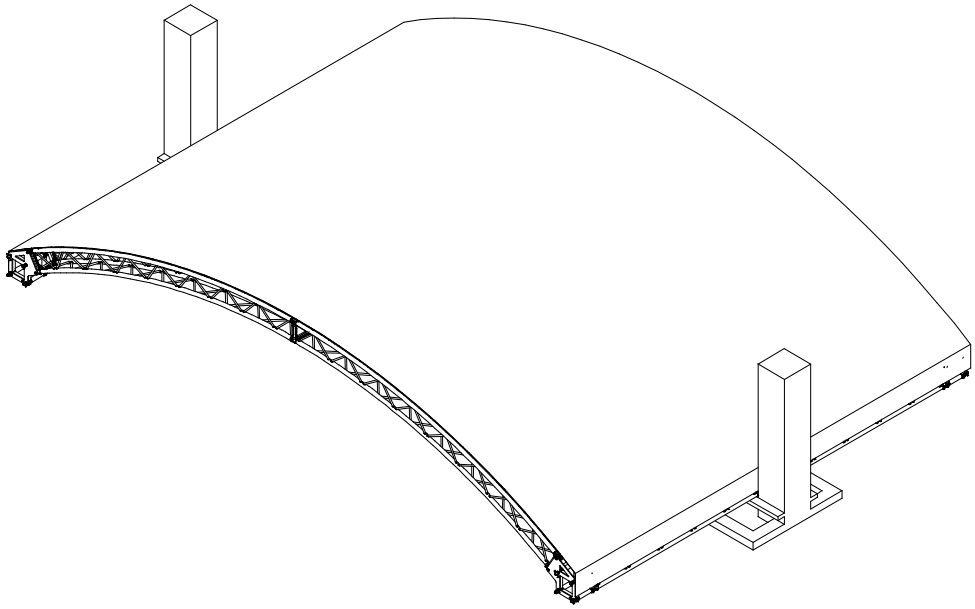
Go to Step 16, page 47

Step 15 RSA0806ST: roof canopy setup.

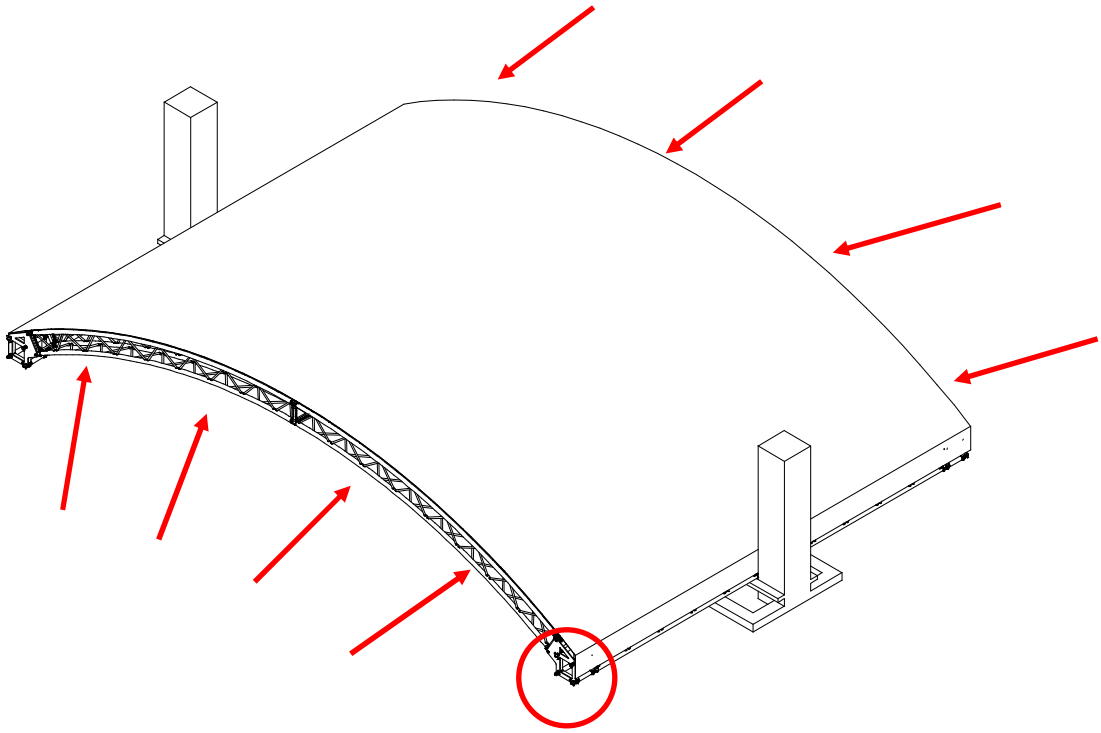
a) Bring the canopy on the top of the structure.

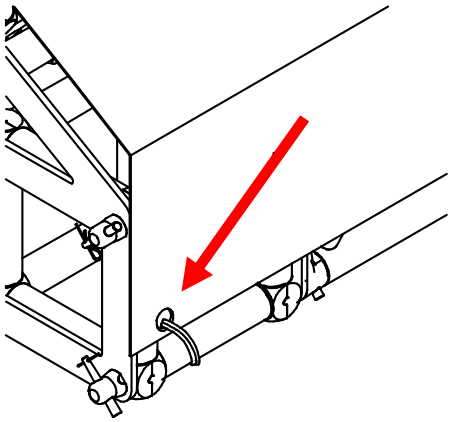


b) Spread out the canopy on the truss structure.



c) Fix the canopy to the structure using the rubberband (LT HRSH20SET) supplied with the components.

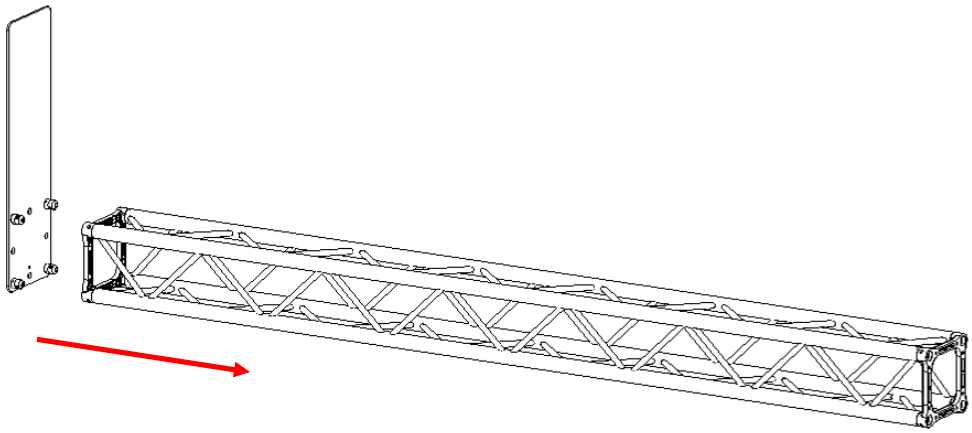




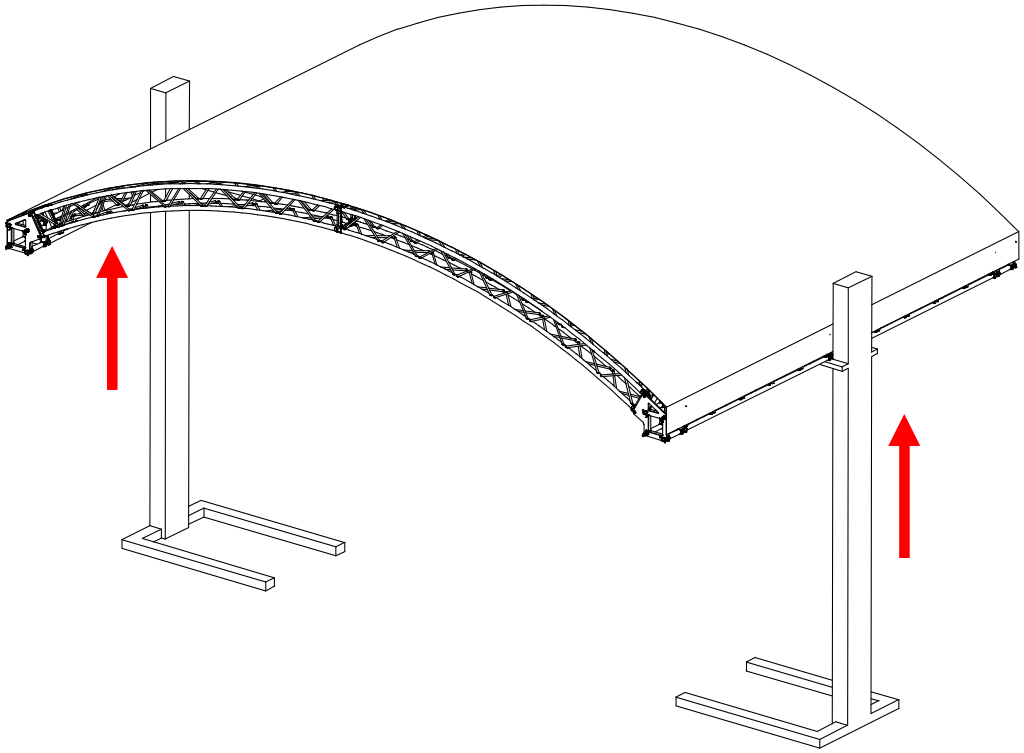
Go to Step 16, page 47

Step 16 RSA0604ST and RSA0806ST: Legs construction and lifting of the structure.

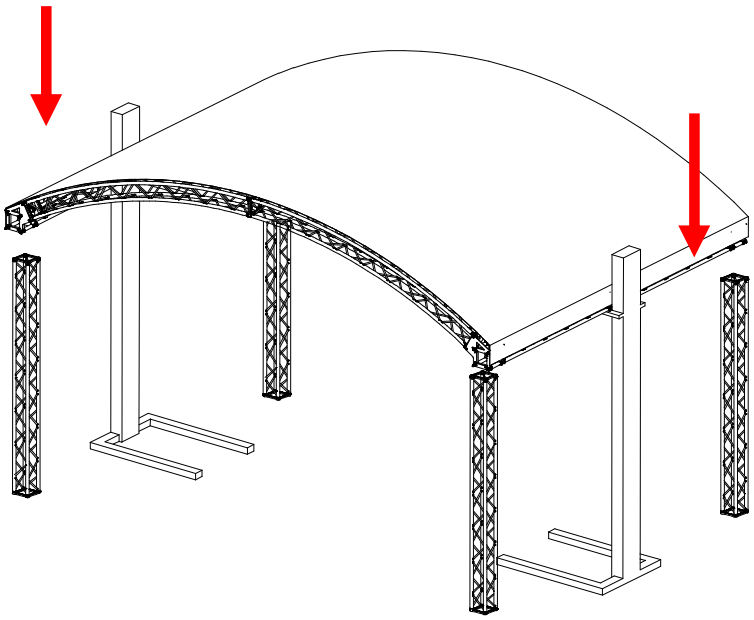
a) Insert the floor plate on the supporting trusses of the arched structure (LT QX30S350).

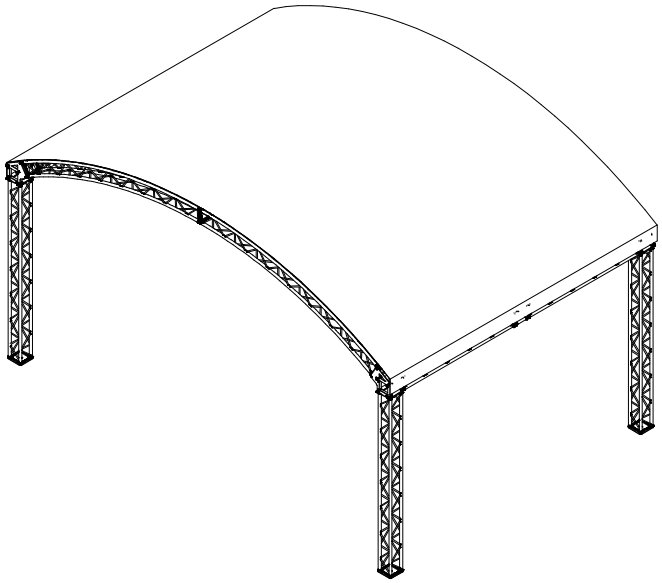


b) Lift the arched structure by the lifting device higher than the supporting trusses, in order to connect the supporting legs to the bottom face of the assembled corner.



c) Fix the pins and split pins in the spigots, when the structure has been lowered on the supporting legs.

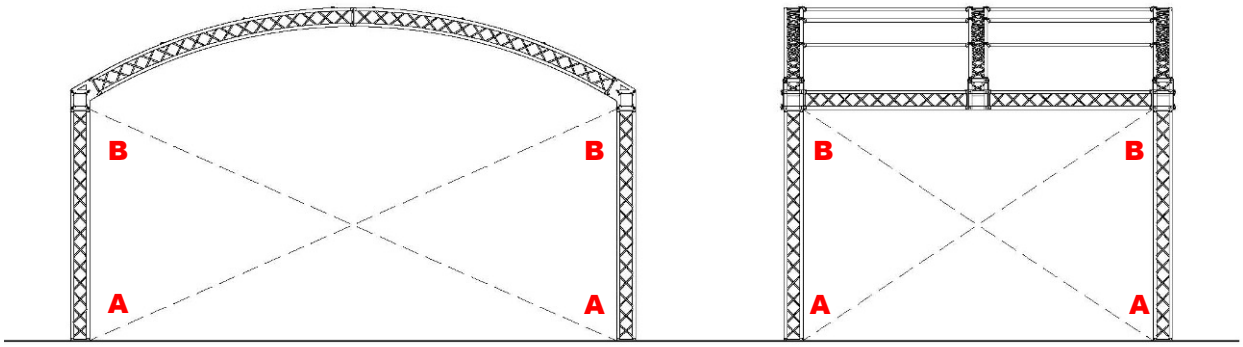


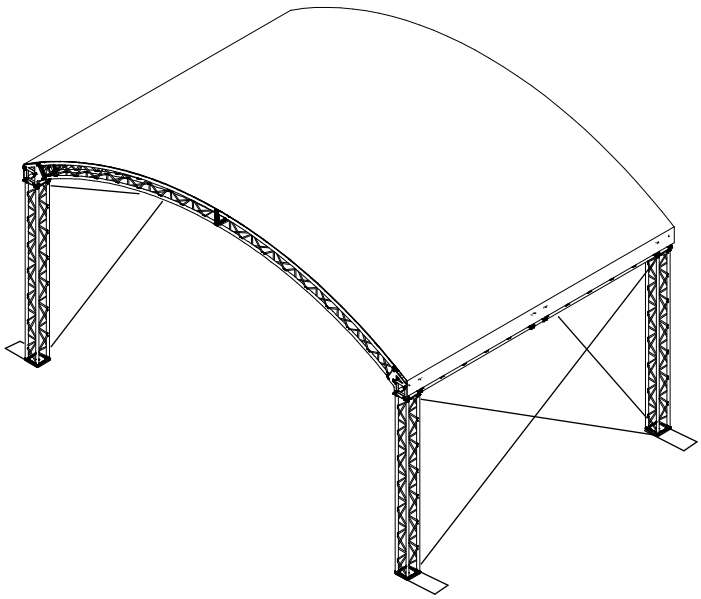


WARNING. In order to perform this operation properly and safety, an operator should reach the connecting points by the right lifting decives and he should wear the proper protective clothes.

Step 17 RSA0604ST and RSA0806ST: messa in sicurezza

Di seguito si inserisce lo schema riassuntivo per la messa in sicurezza:



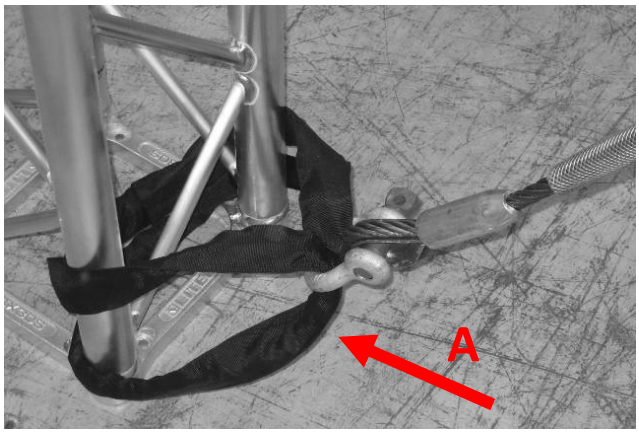


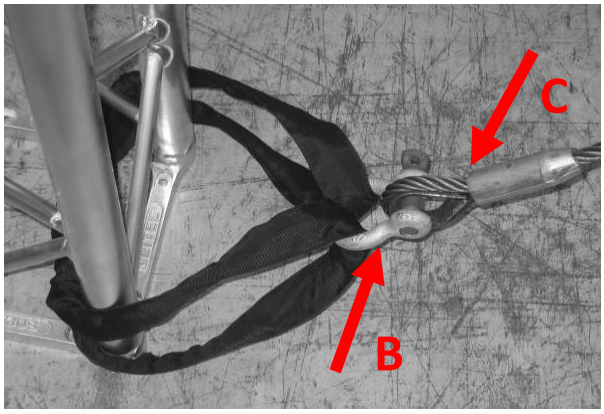
Legenda:

Indicazione	Tipo di messa in sicurezza
A	Attacco basso controvento
B	Attacco alto controvento

Dettaglio attacco basso controvento (A)

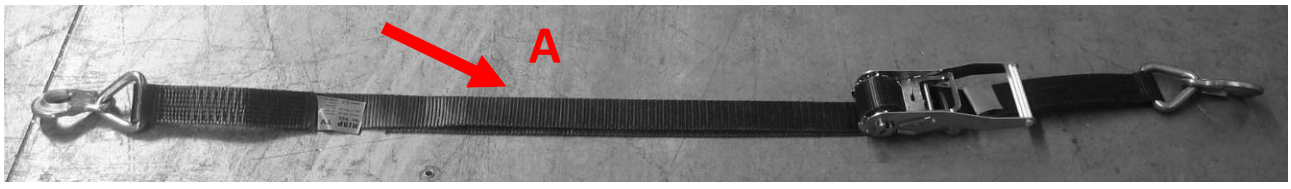
Utilizzare funi ad anello con anima in acciaio di lunghezza 1 m e resistenza a trazione 2 tonnellate (A). Posizionarle nella parte bassa delle colonne di sostegno come illustrato nelle immagini seguenti, e collegare i tiranti con radance (B) mediante grilli resistenti a trazione 3,25 tonnellate (C).





Dettaglio attacco alto controvento (B)

Effettuare le medesime operazioni anche nella parte alta delle colonne di sostegno. Terminata anche questa fase, collegare i tiranti posizionati in basso e i rispettivi tiranti posizionati in alto con una cinghia a cricchetto (A) con resistenza a trazione pari a 2 tonnellate. Infine mettere il tutto in tensione.



6. USE OF THE PRODUCT

6.1 ELECTRICAL POTENTIAL EQUALISATION USEFUL FOR TRUSS SYSTEMS

Truss systems that might develop dangerous touch voltages in the event of an electrical fault, should be incorporated into a common potential equalisation system. The Arc Roof (RSA060ST4 and RSA0806ST) is included in this case. This applies to all elements made of electro-conductive material which have an equipment placed on or attached to them that, in the event of damage, could make electrical contact with metal parts.
The connections can be made with clips, pipe clamps, screw joints or special single-pole locking connectors.

The common potential equalisation system must be connected to the earth wire of the electrical power supply system.

In order to guarantee the electrical safety of the users of the product, a qualified person should realize the electrical potential equalization of the RSA0604ST and RSA0806ST following the laws and regulations of the country where the product is used.
Staging Systems Europe S.p.A. declines any responsability in case of accidents to people or things caused by an incorrect electrical potential equalisation of the product.

7. DISASSEMBLING PROCEDURE

7.1 DISASSEMBLING PROCEDURE

In order to disassemble the product, follow the steps described, in a vice versa order.

8. TRANSPORT AND STORAGE OF THE EQUIPMENT

8.1 TRANSPORT OF THE EQUIPMENT

Before any operations of transport and handling of the product, it is important to dismount all the components as it is described in the dismounting procedure. The components should be handled very carefully to avoid any damages because of shocks and falls.
Individual modules and fully assembled trusses, and any ancillary components that form part of a complete structure, should be handled carefully to avoid impact damage or abrasion.
Trusses should not be dragged.
Trusses should be carried or moved on dollies or trolleys, and laid down carefully.
Trusses should be secured properly and supported during their transportation, and they should be stacked with spacers between successive heights to limit any abrasions.
End connections should be protected from any damages.
Corrosion must be avoid using adequate storage conditions.

9. MAINTENANCE

9.1 MAINTENANCE

In order to guarantee a good working of the product for a long time, the user must subject the product to the maintenance plan defined in this paragraph. It is important to underline that the maintenance must be done by specialized technicians.
Three inspection levels are defined in the checking of the components of the product. The controls of any single element constituting the RSA0604ST and RSA0806ST are shown in the following tables which are divided in different groups.
The parts which are found in bad conditions at the end of the inspection, should be substituted with original spare parts.

Inspection levels
Initial inspections
Whenever the product, either a new or an used one, is acquired the first time, it has to be inspected and a record of the inspection should be maintained.

Regular inspections
Regular visual inspections are bound to be carried out in accordance with tables below. Regular inspections are bound to be performed by a competent person and they are bound to be carried out prior to each use and after any incident that could damage the product.

Periodic inspections
Periodic visual inspections are bound to be carried out in accordance with the table below and a record of the inspections should be maintained. Periodic inspections are bound to be performed by a qualified person and they are bound to be conducted at least once each year or in accordance with an inspection routine established by a qualified person.

9.2 WHAT YOU SHOULD ALWAYS DO

The correct use of the product allows to reach the maximum performance level in the lifting operations.
The following instructions must be respected to ensure the safety of the product:

ALWAYS follow the instructions given in the installation, use and maintenance manual and check the good state of the components of the device.

ALWAYS check the integrity of the guy ropes.

ALWAYS check directly the integrity of all the pins.

ALWAYS use the individual protection devices.

9.3 WHAT YOU MUST AVOID

The use of the product for not allowed movements and the lack of maintenance could cause dangerous situations for the health of the workers.
Obviously, the upper mentioned conditions cause the lack of the performance and safety of the device.
The following actions must be absolutely avoided:

NEVER use the lifting device for lifting or transporting people.

NEVER climb the tower without PPE.

NEVER lift loads when people run in the lifting area.

NEVER use the lifting device without the necessary protective devices.

NEVER operate without paying attention to the movements of tower.

NEVER lift loads with a weight greater than the allowable pay load.

NEVER use the lifting device for different services from their specific ones.

NEVER repair the damaged part of the lifting device in a temporary way.

NEVER use non-original spare parts or not suggested by the manufacturer.

NEVER use unskilled personnel for the operations of maintenance of the product.

9.4 CHECKING OPERATIONS, REGISTRATIONS AND SUBSTITUTIONS

In this registration book, all the operations of maintenance must be written.
The maintenance man should fill in the register quoting the results and possible notes in the right places. Besides the name of the maintenance man and the date of the maintenance operations should be easily identified. Do not hesitate to substitute the part and/or the component if it does not guarantee the safety and the functional reliability.

DATA	*COMPONENT*	*OPERATION*	*RESULT*	*SIGNATURE*

DATA	COMPONENT	OPERATION	RESULT	SIGNATURE

DATA	COMPONENT	OPERATION	RESULT	SIGNATURE

LITEC
truss and more

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